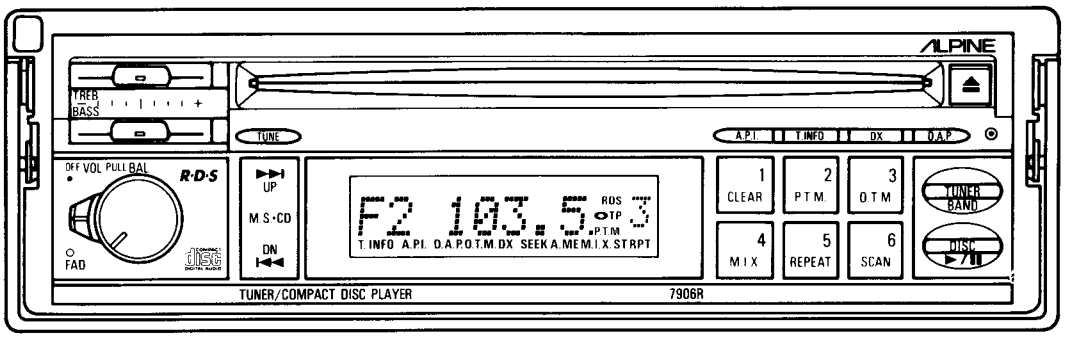
ALPINE SERVICE MANUAL

Digital FM/MW/LW/RDS Compact Disc Player

COMPACT disc DIGITAL AUDIO

REVISED

- Serial Numbers between No. 10718001B and No. 10920500B, after No. 11021001M.
- This service manual contains only the differences from the Service Manual 7906R (68P31588W02).
- For the CD player mechanism parts (DP24A210) of this model, refer to the Service Manual • DP-S Series (68P13315W04).



7906R

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Spare Schematic Diagram Inserted.

Specifications

<CD SECTION>

System	Optical (Compact Disc System)
Quantizing Bit Number	16 Bit Linear System
Channels	2 channels
Distortion (at 1kHz)	0.1%
Freguency Response (Ref. 1kHz)	0 ± 3dB (17Hz)
	0 ± 2dB (127Hz~10.007kHz)
	0 ± 4dB (19.997kHz)
S/N Ratio	80dB
Separation (at 1kHz)	60dB
De-Emphasis (Ref. 1kHz)	4kHz : -20 ± 2dB
	16kHz : -20 ± 2dB
Noise Level (at VOL. Min)	0.1mV
Currents (at Play)	1.2A
Tone Control Effect	Bass : ± 14 ± 3dB (100Hz)
	Treble : ± 13 ± 3dB (10kHz)

<FM SECTION>

Intermediate Frequency	10.7 ± 0.1MHz
Frequency Range	87.5~108MHz
Usable Sensitivity (Mono 30dB S/N, at 98.1MHz)	17.2dBf
Limiting Sensitivity (-10dB, at 98.1MHz)	18.2 ± 6dBf
S/N Ratio (Stereo at 98.1MHz)	48dB
Image Rejection (at 106.1MHz)	40dB
IF Rejection (at 90.1MHz)	60dB
Distortion (Input 1mV at 98.1MHz)	1%
Frequency Response (Ref. 400Hz, at 98.1MHz)	100Hz : 0 ± 3dB
	10kHz : -12 ± 3dB
Stereo Separation (Ref. 1kHz, at 98.1MHz)	25dB
SK Sensitivity (at 98.1MHz)	25.2dBf
PS Sensitivity (at 98.1NHz)	36.2dBf
TP Sensitivity (at 98.1MHz)	36.2dBf

<MW SECTION>

Intermediate Frequency	450kHz
Frequency Range	531~1,602kHz
Sensitivity (20dB S/N, at 999kHz)	34dB
S/N Ratio (at 999kHz)	44dB
Image Rejection (at 1,404kHz)	50dB
IF Rejection (at 603kHz)	60dB
Distortion (at 999kHz)	2%
Frequency Response (Ref. 400Hz, at 999kHz)	100Hz : -3 ± 4dB
	4kHz : -12 ± 6dB

<LW SECTION>

Intermediate Frequency	450kHz
Frequency Range	153~281kHz
Sensitivity (20dB S/N, at 216kHz)	41dB
S/N Ratio (at 216kHz)	40dB
Image Rejection (at 216kHz)	50dB
IF Rejection (at 216kHz)	50dB
Distortion (at 216kHz)	2%
Frequency Response (Ref. 400Hz, at 216kHz)	100Hz : -3 ± 4dB
	4kHz : -12 ± 6dB

<GENERAL>

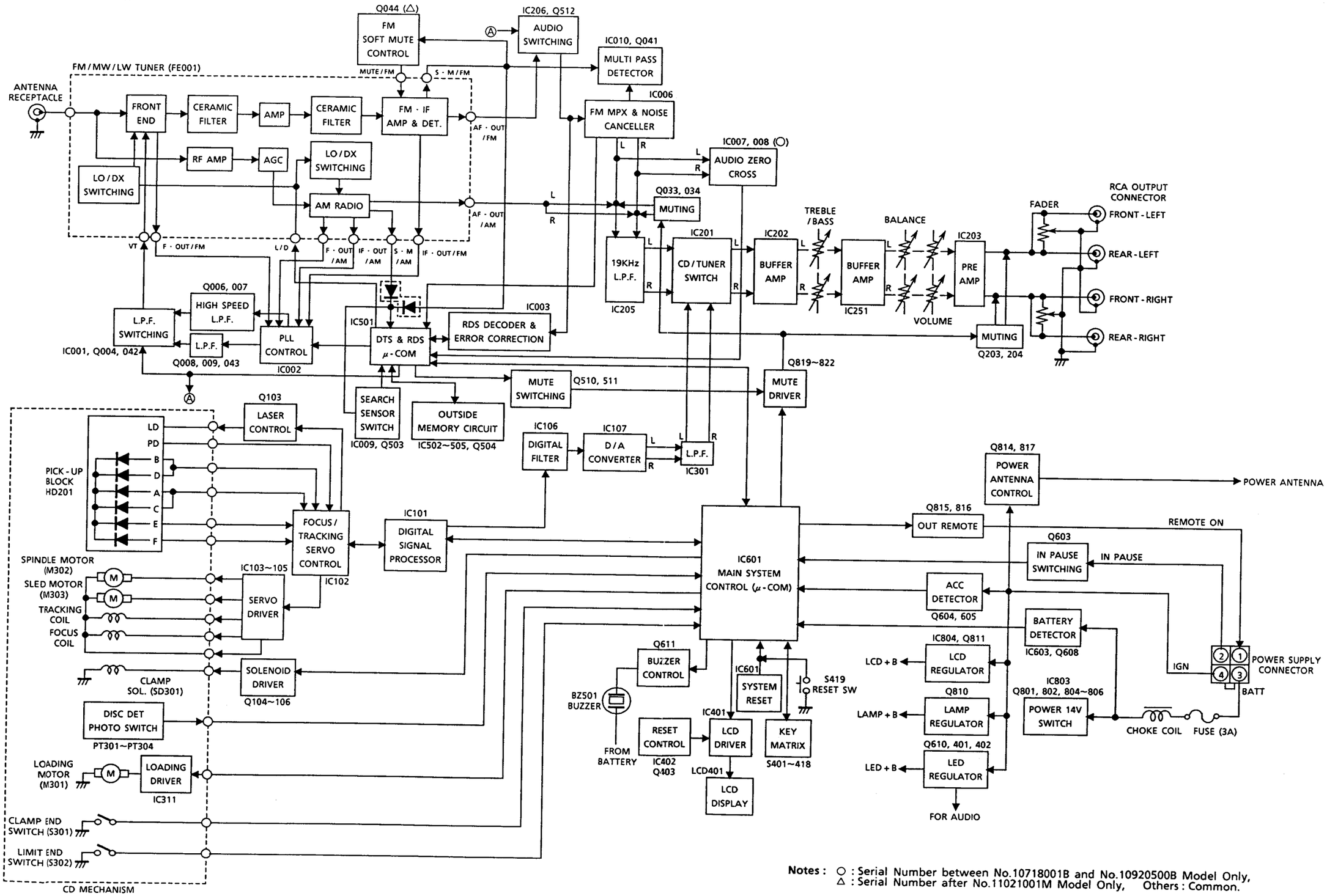
Power Supply	DC14V
Pre-Output Voltage/Impedance	1.2V/10kohm
Semiconductors	39 IC's, 91 Transistors, 25 Diodes, 14 Zener Diodes (○)
	37 IC's, 94 Transistors, 25 Diodes, 14 Zener Diodes (△)
Dimensions (W×H×D)	Chassis : 178×50×153mm
	Nose : 178×50×15mm
Weight	2.2kg

<COMPACT DISC>

Track Pich	1.6μm
Modulation Frequency	44.1kHz
Transfer Rate	4.3218Mbit/sec.
Dimensions	120/80×1.2mm

Notes : Due to Continuing product improvement, specifications and designs are subject to change without notice.
○ : Serial Number between No.10718001B and No.10920500B Model Only,
△ : Serial Number after No.11021001M Model Only, Others : Common.

Block Diagram



Notes : ○ : Serial Number between No.10718001B and No.10920500B Model Only,
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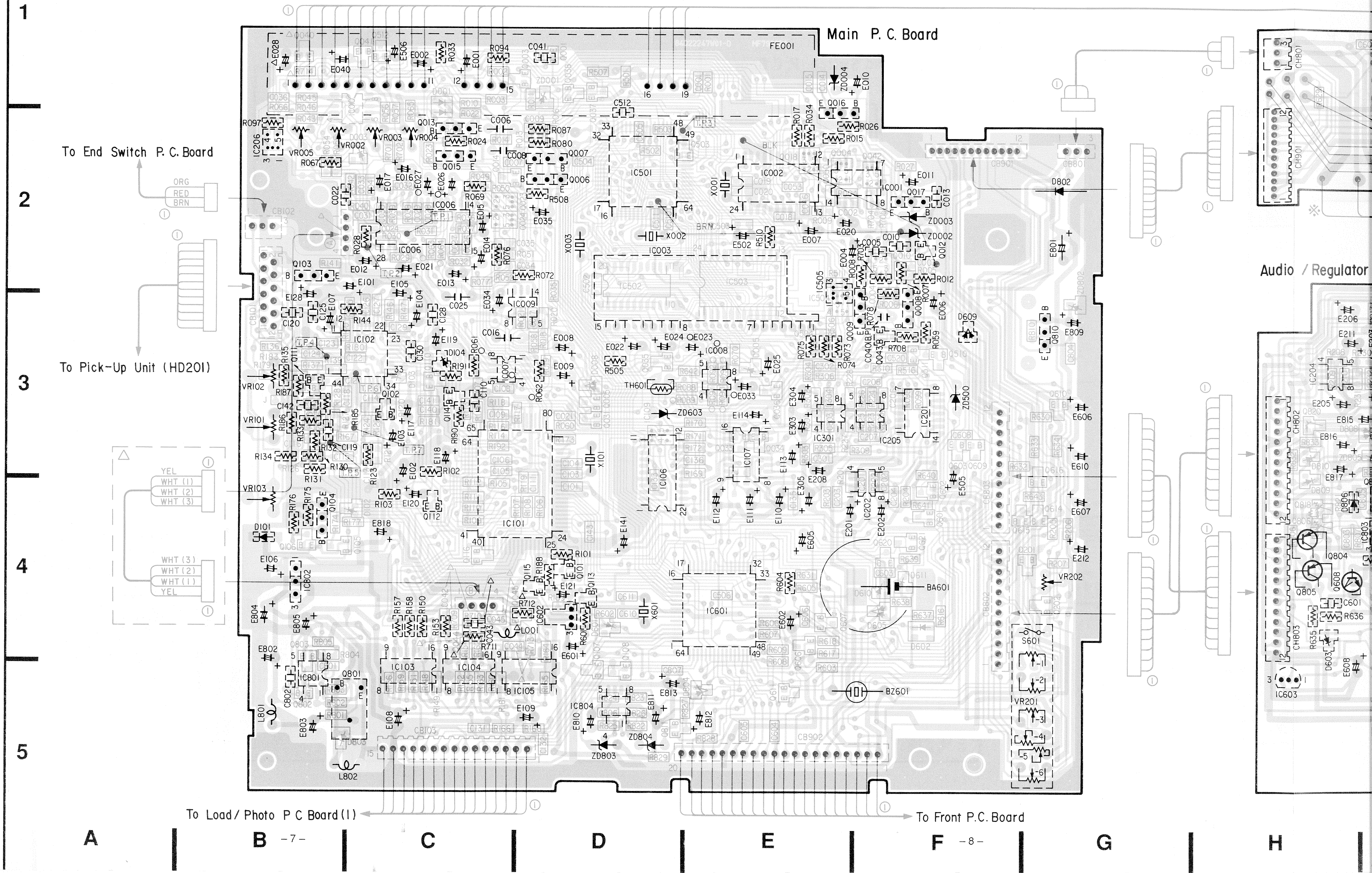
Parts Layout on P.C. Boards and Wiring Diagram (1/2)



g Diagram (1/2)

Main P. C. Board

QRB P. C. Board

QRB Socket (18P)(ET801)

Audio / Regulator P. C. Board

FM/MW/LW Tuner Unit (FE001)

To Front P.C. Board

Notes: ○: Serial Number between No.10718001B and No.10920500B Model Only
△: Serial Number after No.11021001M Model Only
Others: Common

BLU	Blue
GRN	Green
BLK	Black
GRY	Gray
WHT	White
RED	Red
BRN	Brown
ORG	Orange
YEL	Yellow
PNK	Pink
VIO	Violet
GRN/WHT	Green/White
GRY/WHT	Gray/White
GRY/YEL	Gray/Yellow
GRN/YEL	Green/Yellow
SHLD	Shield

D E F G H I J K

Parts Layout on P.C. Boards and Wiring Diagram (2/2)

FPC Actuate P.C. Board
Sled Motor (M303)
LED P.C.Board
Photo Transistor(PT304)
End Switch P.C.Board
Main P.C.B
LD304
BLK
RED
ORG
RED
BRN
WHT
WHT
S301
BLK
RED
WHT
WHT
Spindle Motor (M302)
Limit Switch (S302)
Clamp Solenoid (SD301)
Load/Photo(2) P.C.Board
Pick-Up Unit (HD201)
LD302
R312
R315
CH301
1 5 10 15
PT303
IC311
R317
R313
R319
R318
PT301
R314
CB301
2 10
11
C311
R316
ZD301
C312
PT302
R311
LD301
LD303
Load/Photo (1) P.C.Board
Loading Motor (M301)
LD403
Front P.C.Board
S408
LD402
LD401
LD406
LD405
S406
S405
S404
S403
S417
R421
R420
R412
R416
R425
R424
R423
R410
S412
S411
PL402
S410
S407
PL403
R435
R428
R409
Q404
R427
R426
S416
S415
C409
S414
S413
R408
D22247W02-D
IC401
64
65
80
30
31
20
40
25
24

A B C D E F G H

Diagram (2/2)

ate P.C. Board

Photo Transistor(PT304)

Sled Motor (M303)

End Switch P.C.Board

Main P.C. Board

witch (S302)

Clamp Solenoid (SD301)

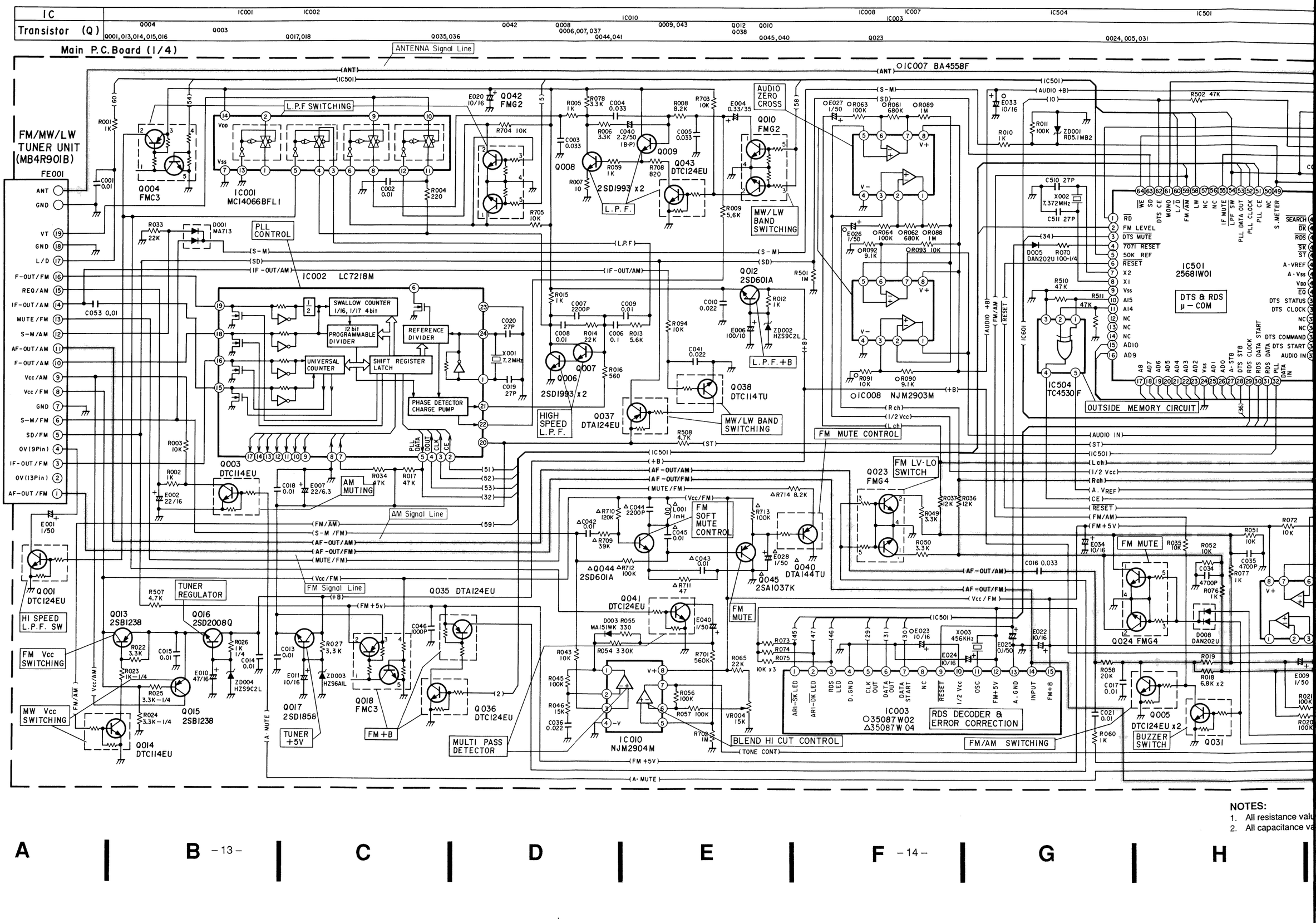
Loading Motor (M301)

Front P.C.Board

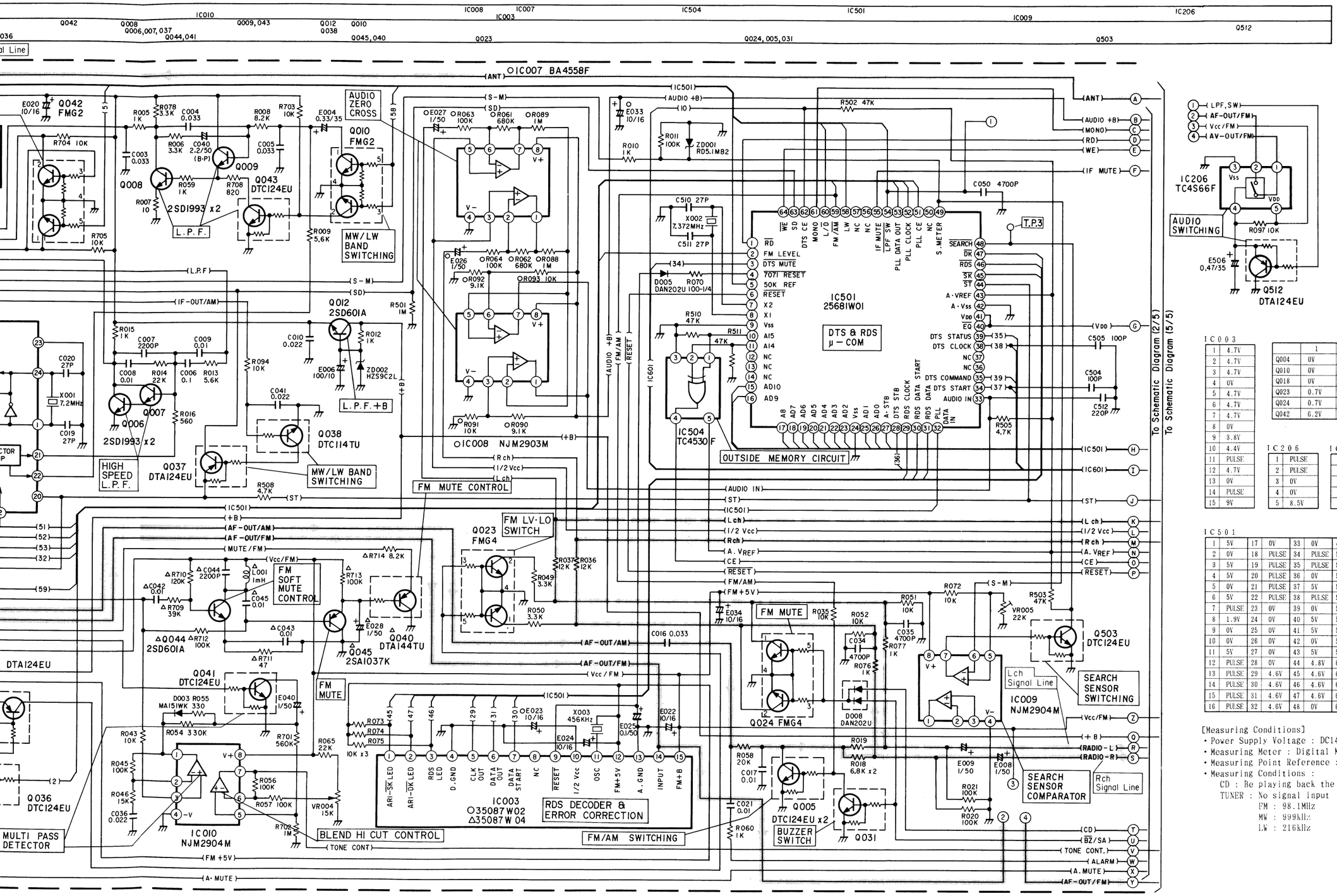
BLU ..... Blue
GRN ..... Green
BLK ..... Black
GRY ..... Gray
WHT ..... White
RED ..... Red
BRN ..... Brown
ORG ..... Orange
YEL ..... Yellow
PNK ..... Pink
VIO ..... Violet
GRN/WHT ..... Green/White
GRY/WHT ..... Gray/White
GRY/YEL ..... Gray/Yellow
GRN/YEL ..... Green/Yellow
SHLD ..... Shield

Schematic Diagram (1/5)

- For Schematic Diagram (5/5) of this Service Manual refer to the Service Manual 7906R (68P31588W02).


IC
Transistor (Q)
IC001
IC002
IC010
IC008
IC007
IC003
IC504
IC501
Q004
Q003
Q042
Q008
Q009, 043
Q012
Q038
Q010
Q001, 013, 014, 015, 016
Q017, 018
Q035, 036
Q006, 007, 037
Q044, 041
Q045, 040
Q023
Q024, 005, 031
Main P.C.Board (1/4)
ANTENNA Signal Line
FM/MW/LW TUNER UNIT (MB4R901B)
FE001
ANT
GND
VT
L/D
F-OUT/FM
REQ/AM
IF-OUT/AM
MUTE/FM
S-M/AM
AF-OUT/AM
Vcc/AM
Vcc/FM
S-M/FM
SD/FM
OV(9Pin)
IF-OUT/FM
OV(13Pin)
AF-OUT/FM
Q004 FMC3
IC001 MC14066BFLI
L.P.F SWITCHING
Q042 FMG2
Q008
Q009
Q043 DTC124EU
2SD1993 x2
L.P.F.
Q010 FMG2
AUDIO ZERO CROSS
MW/LW BAND SWITCHING
IC007 BA4558F
PLL CONTROL
IC002 LC7218M
SWALLOW COUNTER 1/16, 1/17 4bit
12 bit PROGRAMMABLE DIVIDER
REFERENCE DIVIDER
UNIVERSAL COUNTER
SHIFT REGISTER LATCH
PHASE DETECTOR CHARGE PUMP
Q012 2SD601A
Q007
Q006
2SD1993 x2
HIGH SPEED L.P.F.
Q037 DTA124EU
L.P.F.+B
Q038 DTC114TU
MW/LW BAND SWITCHING
IC008 NJM2903M
FM MUTE CONTROL
IC501 25681W01
DTS & RDS μ-COM
IC504 TC4530F
OUTSIDE MEMORY CIRCUIT
Q003 DTC114EU
AM MUTING
AM Signal Line
FM Signal Line
Q023 FMG4
FM LV-LO SWITCH
FM SOFT MUTE CONTROL
Q044 2SD601A
Q041 DTC124EU
Q040 DTA144TU
Q045 2SA1037K
FM MUTE
Q024 FMG4
Q001 DTC124EU
HI SPEED L.P.F. SW
TUNER REGULATOR
Q013 2SB1238
Q016 2SD2008Q
Q015 2SB1238
Q014 DTC114EU
FM Vcc SWITCHING
MW Vcc SWITCHING
Q017 2SD1858
TUNER +5V
Q018 FMC3
FM+B
Q035 DTA124EU
Q036 DTC124EU
MULTI PASS DETECTOR
IC010 NJM2904M
IC003 ○35087W02 △35087W04
RDS DECODER & ERROR CORRECTION
BLEND HI CUT CONTROL
FM/AM SWITCHING
Q005 DTC124EU x2
BUZZER SWITCH
Q031
D001 MA713
D003 MA151WK
D005 DAN202U
D008 DAN202U
ZD001 RD5.1MB2
ZD002 HZS9C2L
ZD003 HZS6AIL
ZD004 HZS9C2L
X001 7.2MHz
X002 7.372MHz
X003 456KHz
C511 27P
C510 27P
R502 47K
R501 1M
R510 47K
R511 47K
R072 10K
R051 10K
R052 10K
R035 10K
R019 6.8K x2
R018 6.8K x2
R058 20K
C017 0.01
C021 0.01
R060 1K
C035 4700P
C034 4700P
R077 1K
R076 1K
C016 0.033
R037 12K
R036 12K
R049 3.3K
R050 3.3K
R714 8.2K
R713 100K
R712 100K
R711 47
R710 120K
R709 39K
C044 2200P
C042 0.01
C045 0.01
C043 0.01
L001 1mH
R701 560K
R065 22K
R054 330K
R043 10K
R045 100K
R046 15K
C036 0.022
R056 100K
R057 100K
VR004 15K
R702 1M
R073
R074
R075
10K x3
E022 10/16
E025 0.1/50
E024 10/16
E023 10/16
E034 10/16
E009 1/50
E033 10/16
E028 1/50
E027 1/50
E026 1/50
R063 100K
R061 680K
R089 1M
R062 680K
R088 1M
R064 100K
R092 9.1K
R093 10K
R091 10K
R090 9.1K
R010 1K
R011 100K
R094 10K
R012 1K
E006 100/10
C041 0.022
C010 0.022
R508 4.7K
R507 4.7K
R033 22K
R022 3.3K
R023 1K-1/4
R025 3.3K-1/4
R024 3.3K-1/4
R026 1K 1/4
C015 0.01
C014 0.01
E010 47/16
C013 0.01
E011 10/16
R027 3.3K
C046 1000P
C053 0.01
C001 0.01
C002 0.01
C003 0.033
C004 0.033
C005 0.033
C040 2.2/50 (B-P)
C007 2200P
C009 0.01
C008 0.01
C006 0.1
C018 0.01
E007 22/6.3
C020 27P
C019 27P
R001 1K
R002 1K
R003 10K
R004 220
R005 1K
R006 3.3K
R078 3.3K
R008 8.2K
R703 10K
R704 10K
R705 10K
R059 1K
R007 10
R708 820
R009 5.6K
R014 22K
R015 1K
R016 560
R034 47K
R017 47K
E001 1/50
E002 22/16
E004 0.33/35
E020 10/16
E040 1/50
R704 10K
R027 3.3K
R055 330K
R043 10K
R045 100K
R046 15K
C036 0.022
R056 100K
R057 100K
VR004 15K
R702 1M
R701 560K
R065 22K
R054 330K
R073
R074
R075
10K x3
E022 10/16
E025 0.1/50
E024 10/16
E023 10/16
E034 10/16
E009 1/50
E033 10/16
E028 1/50
E027

(5/5) of this Service Manual
ual 7906R (68P31588W02).



IC001	
1	0V
2	0V
3	0.6V
4	0.6V
5	9V
6	6.2V
7	0V
8	3.3V
9	3.3V
10	3.3V
11	0.6V
12	0V
13	0V
14	9V

IC007	
1	PULSE
2	0V
3	4.4V
4	0V
5	4.4V
6	4.4V
7	PULSE
8	8.4V

IC008	
1	PULSE
2	PULSE
3	0V
4	0V
5	PULSE
6	4V
7	PULSE
8	8.4V

IC009	
1	0V
2	0V
3	0V
4	0V
5	3.6V
6	4.6V
7	0V
8	8.9V

IC002			
1	1.7V	13	0V
2	0V	14	0V
3	0V	15	0V
4	0V	16	0V
5	4.6V	17	0V
6	0V	18	0V
7	4.6V	19	2.1V
8	0V	20	4.9V
9	0V	21	1.1V
10	0V	22	PULSE
11	0V	23	0V
12	0V	24	2.5V

IC010	
1	5.6V
2	5.6V
3	5.5V
4	0V
5	1.5V
6	2.4V
7	4.5V
8	8.9V

IC003	
1	4.7V
2	4.7V
3	4.7V
4	0V
5	4.7V
6	4.7V
7	4.7V
8	0V
9	3.8V
10	4.4V
11	PULSE
12	4.7V
13	0V
14	PULSE
15	9V

	1	2	3	4	5
Q004	0V	9V	9V	5V	0V
Q010	0V	6.3V	0V	0V	0V
Q018	0V	4.7V	4.9V	9V	0V
Q023	0.7V	0.7V	0V	0V	
Q024	0.7V	0.7V	0V	0V	
Q042	6.2V	0V	6.2V	0V	0V

IC206	
1	PULSE
2	PULSE
3	0V
4	0V
5	8.5V

IC504	
1	0V
2	5V
3	0V
4	0.9V
5	5V

IC501							
1	5V	17	0V	33	0V	49	PULSE
2	0V	18	PULSE	34	PULSE	50	0V
3	5V	19	PULSE	35	PULSE	51	0V
4	5V	20	PULSE	36	0V	52	0V
5	0V	21	PULSE	37	5V	53	0V
6	5V	22	PULSE	38	PULSE	54	0V
7	PULSE	23	0V	39	0V	55	0V
8	1.9V	24	0V	40	5V	56	0V
9	0V	25	0V	41	5V	57	0V
10	0V	26	0V	42	0V	58	0V
11	5V	27	0V	43	5V	59	4.9V
12	PULSE	28	0V	44	4.8V	60	0V
13	PULSE	29	4.6V	45	4.6V	61	0V
14	PULSE	30	4.6V	46	4.6V	62	5V
15	PULSE	31	4.6V	47	4.6V	63	0V
16	PULSE	32	4.6V	48	0V	64	5V

	E	C	B
Q001	0V	0V	9V
Q003	0V	0V	4.9V
Q005	0V	0V	3.5V
Q006	0V	0.6V	0.6V
Q007	0.6V	0.6V	1.1V
Q008	0V	3.3V	0.5V
Q009	0.5V	9V	1.1V
Q012	9V	14.2V	9.6V
Q013	9V	9V	8.2V
Q014	0V	0V	4.9V
Q015	9V	0V	8.9V
Q016	9.6V	14.2V	9V
Q017	4.7V	14.2V	5.4V
Q031	0V	3.5V	0V
Q035	4.7V	0V	4.5V
Q036	0V	4.5V	0V
Q037	4.9V	4.7V	4.7V
Q038	0V	4.7V	0V
△Q040	6.6V	0V	6.1V
Q041	0V	0V	9V
Q043	0V	0V	6.3V
△Q044	1.4V	8.5V	2V
△Q045	6.1V	0V	5.1V
Q503	0V	4.8V	0V
Q512	0V	0V	0V

[Measuring Conditions]
- Power Supply Voltage : DC14V
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point Reference : Between Ground
- Measuring Conditions :
  CD : Be playing back the 2nd Music of the test CD (YEDS-18)
  TUNER : No signal input
  FM : 98.1MHz
  MW : 999kHz
  LW : 216kHz

NOTES:
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$

7906R 7906R

Schematic Diagram (2/5)

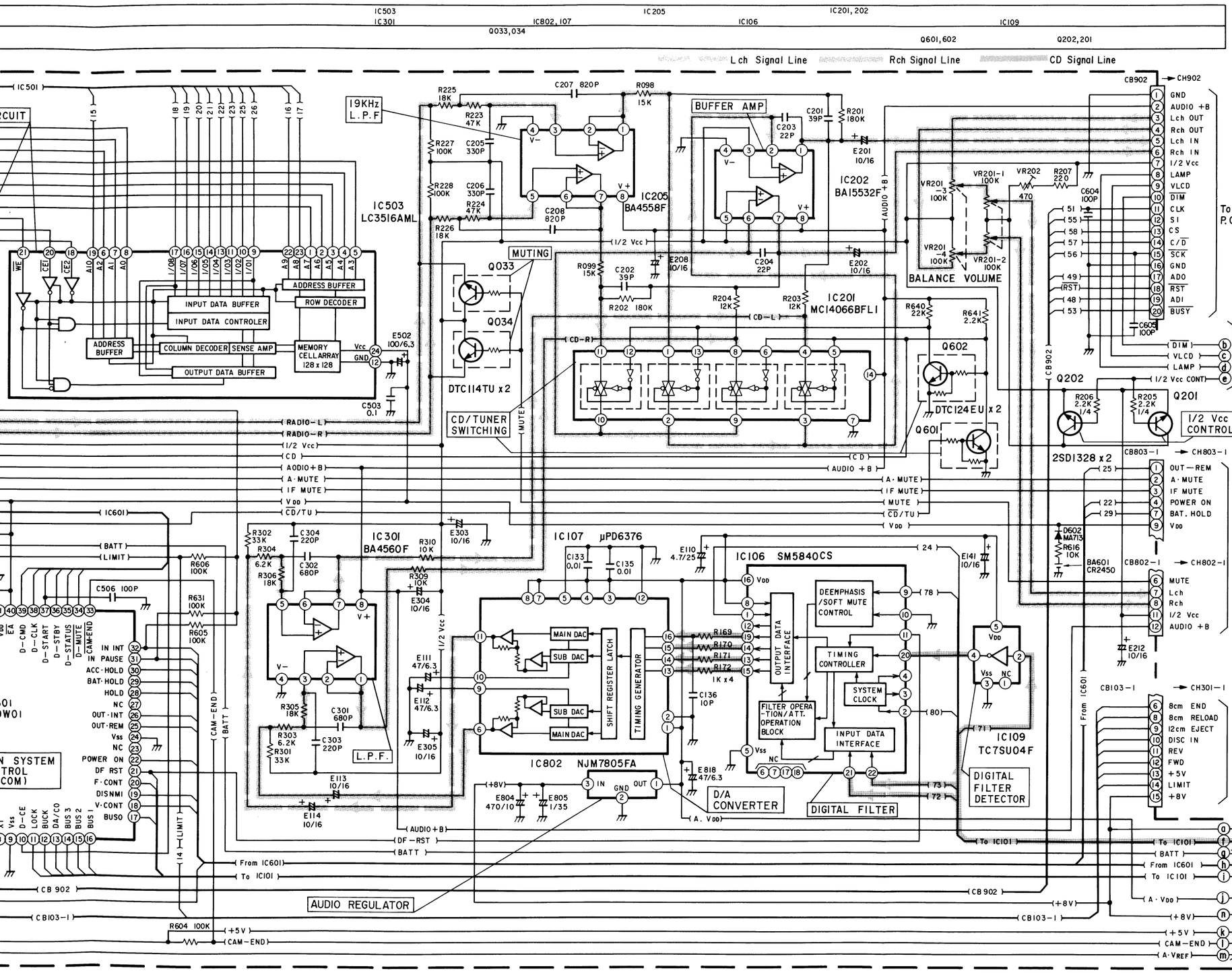
IC	IC602	IC502	IC505	IC601	IC503 IC301	IC802, 107	IC205	IC106	IC201, 202	IC109
Transistor (Q)	Q510, 511 Q611, 107, 108	Q504			Q033, 034				Q601, 602	

Main P.C. Board (2/4)

Lch Signal Line Rch Signal Line

NOTES:

1. All resistance values are i



IC502

1	0V	11	PULSE
2	PULSE	12	PULSE
3	PULSE	13	PULSE
4	PULSE	14	PULSE
5	PULSE	15	PULSE
6	PULSE	16	PULSE
7	PULSE	17	PULSE
8	PULSE	18	PULSE
9	PULSE	19	PULSE
10	0V	20	4.9V

IC503

1	PULSE	13	PULSE
2	PULSE	14	PULSE
3	PULSE	15	PULSE
4	PULSE	16	PULSE
5	PULSE	17	PULSE
6	PULSE	18	PULSE
7	PULSE	19	PULSE
8	PULSE	20	4.9V
9	PULSE	21	0V
10	PULSE	22	PULSE
11	PULSE	23	PULSE
12	0V	24	4.9V

IC601

1	4.1V	17	PULSE	33	0V	49	4.9V
2	4.8V	18	4.8V	34	0V	50	0V
3	0V	19	0V	35	PULSE	51	PULSE
4	0V	20	0V	36	0V	52	0V
5	0V	21	4.9V	37	PULSE	53	PULSE
6	4.8V	22	4.8V	38	0V	54	0V
7	PULSE	23	PULSE	39	0V	55	PULSE
8	1.8V	24	0V	40	4.9V	56	PULSE
9	0V	25	4.8V	41	4.9V	57	PULSE
10	4.9V	26	0V	42	4.9V	58	PULSE
11	4.9V	27	0V	43	0V	59	0V
12	PULSE	28	0.3V	44	5V	60	0V
13	PULSE	29	4.8V	45	5V	61	4.8V
14	PULSE	30	4.8V	46	4.5V	62	4.1V
15	PULSE	31	4.5V	47	0V	63	0V
16	PULSE	32	4.5V	48	0V	64	0V

IC505

1	4.9V
2	0V
3	4.9V
4	4.9V
5	5V

IC602

1	4.8V
2	4.8V
3	0V

IC802

1	8.7V
2	0V
3	5.1V

IC106

1	0V	12	PULSE
2	2V	13	PULSE
3	3.1V	14	PULSE
4	PULSE	15	PULSE
5	0V	16	4.9V
6	0V	17	0V
7	0V	18	0V
8	4.9V	19	PULSE
9	0V	20	PULSE
10	0V	21	PULSE
11	4.9V	22	PULSE

IC107

1	4.9V
2	0V
3	4.9V
4	4.9V
5	0V
6	1.5V
7	4.9V
8	4.9V
9	2V
10	2V
11	1.5V
12	0V
13	PULSE
14	PULSE
15	PULSE
16	PULSE

IC201

1	4.3V
2	4.4V
3	4.4V
4	4.4V
5	5.9V
6	5.9V
7	0V
8	4.4V
9	4.4V
10	4.4V
11	4.4V
12	0V
13	0V
14	8.4V

IC301

1	4.2V
2	4.2V
3	4V
4	0V
5	PULSE
6	PULSE
7	4.2V
8	8.2V

IC109

1	PULSE
2	0V
3	PULSE
4	4.9V
5	0V

IC202

1	PULSE
2	4.2V
3	4.2V
4	0V
5	4.2V
6	4.2V
7	PULSE
8	8.2V

IC205

1	4.4V
2	4.4V
3	3.8V
4	0V
5	3.8V
6	4.4V
7	4.4V
8	8.4V

	E	C	B
Q033	4V	4.4V	0V
Q034	4.4V	4V	0V
Q107	5.1V	4.7V	0V
Q108	0V	0V	4.9V
Q201	4.2V	4.2V	4.9V
Q202	4.2V	4.2V	4.9V
Q504	0V	4.5V	0.9V
Q510	14V	14V	0V
Q511	0V	0V	5V
Q601	0V	5.9V	0V
Q602	0V	0V	5.9V
Q611	0V	14.5V	0V

[Measuring Conditions]
- Power Supply Voltage : DC14V
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point Reference : Between Ground
- Measuring Conditions :
  CD : Be playing back the 2nd Music of the test CD (YEDS-18)
  TUNER : No signal input
  FM : 98.1MHz
  MW : 999kHz
  LW : 216kHz

NOTES:
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1{,}000{,}000}$

Schematic Diagram (3/5)

I C	IC401	IC251 IC402	IC803	IC203	IC204 IC603
Transistor (Q)	Q404, 401, 402	Q403		Q819, 821, 812 Q805, 804, 806, 818	Q605, 604, 813, 822

Front P.C.Board

LCD 401

IC 401
μPD7228AG
LCD DRIVER

IC251
NJM4580E

BUFFER AMP

IC402
L78LR05GFA

RESET CONTROL

Q403
DTC124K

START UP
VREF
PROTE -CTOR
ERROR AMP
RESSET
VO DET

Q404
2SD874A

LAMP REGULATOR

PL401
6.7V-85mA

PL403
6V-70mA

PL402
6V-70mA

PL405
6V-70mA

PL404
6V-70mA

ZD401
RD9.1HB3

Q401
DTC124K

Q402
DTC124EU

DIMMER CONTROL

LD401~406
MBG4868K

LD403
LD406
LD402
LD405
LD401
LD404
LD251
LD252

S401 .UP
S402 TUNE
S403 A.P.I
S404 T.INFO
S405 DX
S406 D.A.P
S407 TUNER BAND
S408 (EJECT)
S409 DN
S410 MI CLEAR
S411 M2 P.T.M
S412 M3 O.T.M
S413 M4 M.I.X
S414 M5 REPEAT
S415 M6 SCAN
S416 DISC ▶/II

S401~417
SKHLAJ

RESET
S417

Main P.C.Board

CH902 CB902

GND
Vcc
Lch-OUT
Rch-OUT
Lch-IN
Rch-IN
1/2Vcc
LAMP
VLCD
DIM
CLK
SI
CS
C/D
SCK
Vss
ADO
RST
ADI
BUSY

CB802 CH802

R-L
F-L
R-R
F-R
-G
MUTE
Lch
Rch
P.ANT
REM-ON
1/2 Vcc
AUDIO +B

PRE AMP
1/2 Vcc (FOR AUDIO)
TEMPERATUR

IC203
BA15532F

IC204 BA4

CB803 CH803

OUT-REM
A.MUTE
IF-MUTE
POWER ON
+B
ACC HOLD
BAT HOLD
+5V
VDD
BATT
IGN
GND

MUTING DRIVER

Q819
DTA124EU

Q821
DTC124EU

Q822
DTC124EU

D807
DAN202U

D808
DAN202U

POWER ANTENNA CONTROL CIRCUIT

Q812
2SA1576

Q813
DTC124K

Q814
2SB13

D805
DA204U

Audio/Regulator P.C.Board

IC803
M5236ML

ASO PROTECTOR
START CIRCUIT
OVER CURRENT PROTECTOR
REF. VOLT GENERATOR

Q804
2SB1240

Q805
2SB1240

Q806
DTA124EU

Q818
DTC124EU

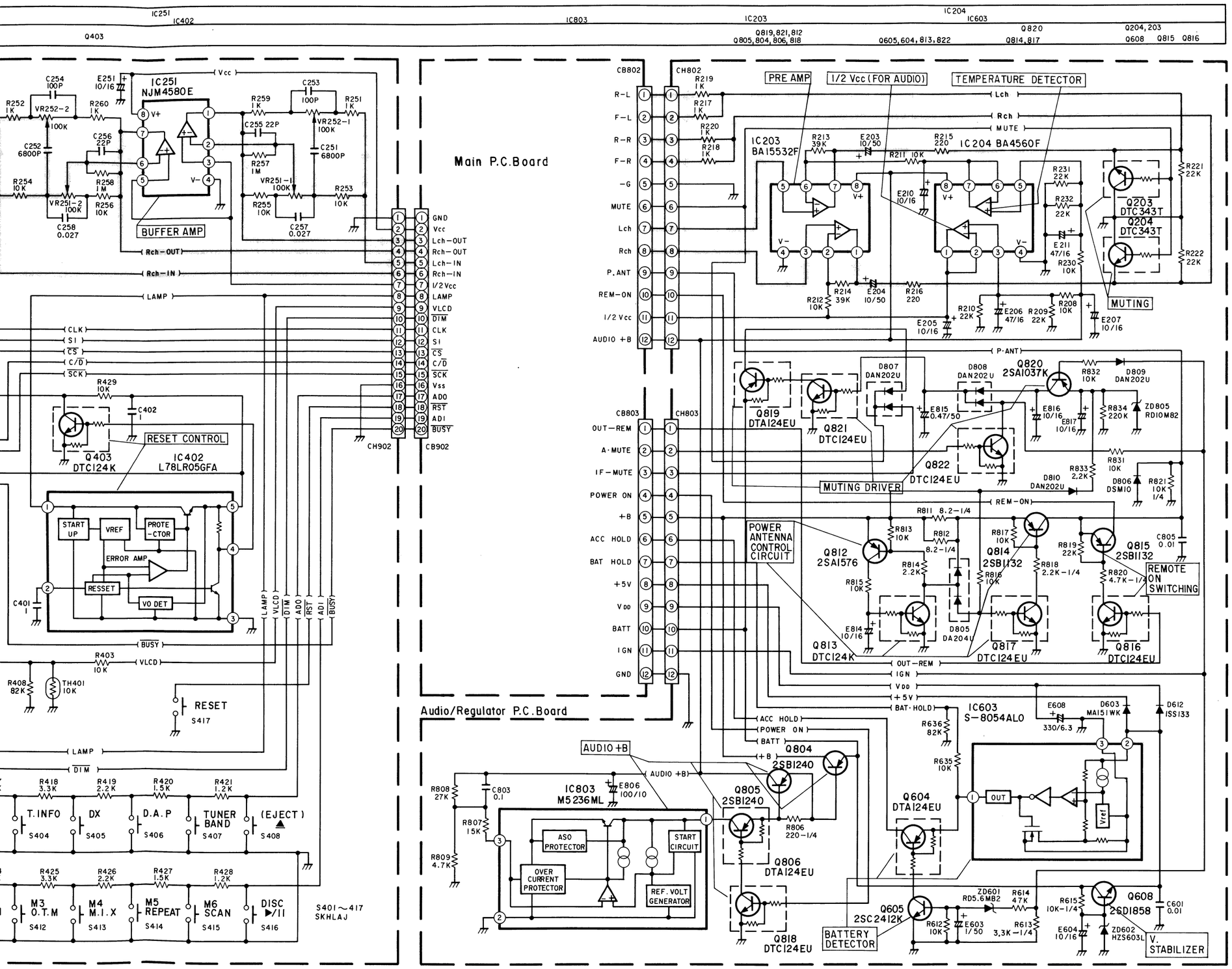
Q605
2SC2412K

Q604
DTA124EU

BATTERY DETECTOR

IC603
S-8054AL

ZD601
RD5.6MB2



IC401

1	PULSE	17	PULSE	33	5V	49	1.9V	65	1.9V
2	PULSE	18	PULSE	34	0V	50	PULSE	66	1.9V
3	PULSE	19	PULSE	35	PULSE	51	PULSE	67	1.9V
4	0V	20	PULSE	36	PULSE	52	1.9V	68	1.9V
5	0V	21	-1V	37	0V	53	PULSE	69	1.9V
6	PULSE	22	3.4V	38	0V	54	PULSE	70	1.9V
7	PULSE	23	0V	39	PULSE	55	PULSE	71	1.9V
8	1.8V	24	0.4V	40	0V	56	PULSE	72	1.9V
9	PULSE	25	1.8V	41	PULSE	57	PULSE	73	1.9V
10	PULSE	26	1.8V	42	0V	58	PULSE	74	PULSE
11	PULSE	27	PULSE	43	1.9V	59	PULSE	75	PULSE
12	PULSE	28	0V	44	0V	60	PULSE	76	PULSE
13	PULSE	29	0V	45	PULSE	61	PULSE	77	1.9V
14	PULSE	30	0V	46	PULSE	62	PULSE	78	PULSE
15	PULSE	31	PULSE	47	1.9V	63	1.9V	79	PULSE
16	PULSE	32	PULSE	48	1.9V	64	1.9V	80	PULSE

IC402

1	12.7V
2	5.7V
3	0V
4	3.2V
5	4.8V

IC251

1	PULSE
2	4.3V
3	4.3V
4	0V
5	4.3V
6	4.3V
7	PULSE
8	8.3V

IC203

1	PULSE
2	PULSE
3	4.2V
4	0V
5	4.2V
6	PULSE
7	PULSE
8	8.3V

IC204

1	4.3V
2	4.3V
3	0V
4	0V
5	4.3V
6	4.3V
7	4.3V
8	8.3V

IC603

1	5.4V
2	5.7V
3	0V

IC803

1	13.3V
2	0V
3	1.21V

	E	C	B
Q203	0V	0V	0V
Q204	0V	0V	0V
Q401	0V	0.4V	7.5V
Q402	0V	0.4V	7.5V
Q403	0V	0V	3.3V
Q404	10.3V	12.7V	11V
Q604	5.3V	5.3V	0V
Q605	0V	0V	0.4V
Q608	5.6V	14.2V	6.2V
Q804	14.3V	14.2V	13.5V
Q805	13.8V	8.2V	13.2V
Q806	12.9V	12.9V	10V
Q812	14.1V	0V	14.1V
Q813	0V	14V	0V
Q814	14.1V	14.1V	13.4V
Q815	14.1V	14.1V	13.4V
Q816	0V	0V	4.8V
Q817	0V	0V	9.5V
Q818	0V	0V	4.8V
Q819	14.2V	0V	13.7V
Q820	9.9V	0V	9.3V
Q821	0V	13.7V	0V
Q822	0V	0V	4.8V

[Measuring Conditions]
- Power Supply Voltage : DC14V
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point Reference : Between Ground
- Measuring Conditions :
  CD : Be playing back the 2nd Music of the test CD (YEDS-18)
  TUNER : No signal input
  FM : 98.1MHz
  MW : 999kHz
  LW : 216kHz

Lch Signal Line

Rch Signal Line

NOTES:
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. P = $\frac{1}{1{,}000{,}000}$

7906R 7906R

Schematic Diagram (4/5)

IC	IC311	IC102	IC101	IC103	IC10
Transistor (Q)	Q103 Q111 Q110	Q102 Q115 Q113 Q114 Q101	Q112	Q116	

Main P.C.Board (3/4)

Q103 2SB1240

Q102 2SA1037K

Q111 2SC2412K

Q110 DTC114EU

Q115 DTA124EU

Q101 DTC124EU

Q116 DTC124EU

Q114 DTC124EU

Q113 DTC114TU x2

Q112

IC102 TA8191F — FOCUS / TRACKING SERVO CONTROL

IC101 TC9236F — DIGITAL SIGNAL PROCESSOR

IC103~105 TCA0372M

IC311 LB1641

REGULATOR (FOR IC102)

CD WOUND SWITCHING

FM MUTE CONTROL

SUB BEAM CONTROL

LASER CONTROL

HD201-1 PICK-UP UNIT

LASER DIODE

CD WOUND DETECTOR

X101 16,9344MHz

T.P.4 T.P.5 T.P.6 T.P.7

1/2 Vcc

CD Signal L

FOCUS SERV

TRACKING S

SPINDLE SE

SLED SERV

To Schematic Diagram (2/5)

8cm CD END DETECTOR

CD IN/OUT DETECTOR

8cm CD RELOAD DETECTOR

12cm CD EJECT END DETECTOR

LOADING MOTOR DETECTOR

SLED SERVO DRIVER

CD Deck Mechanism DP24A210

PT304 PT360

PT303 PT302 PT301

PT360 x3

AN501-B1x3

LD304 AN501-B1

LD301 LD302 LD303

LOADING MOTOR

Load/Photo P.C.Board

S302 LIMIT SW

ZD301 UTZJ6.2C

PRE-DRIVER

INPUT LOGIC BLOCK

SPINDLE MOTOR

SLED MOTOR

FOCUS COIL

TRACKING COIL

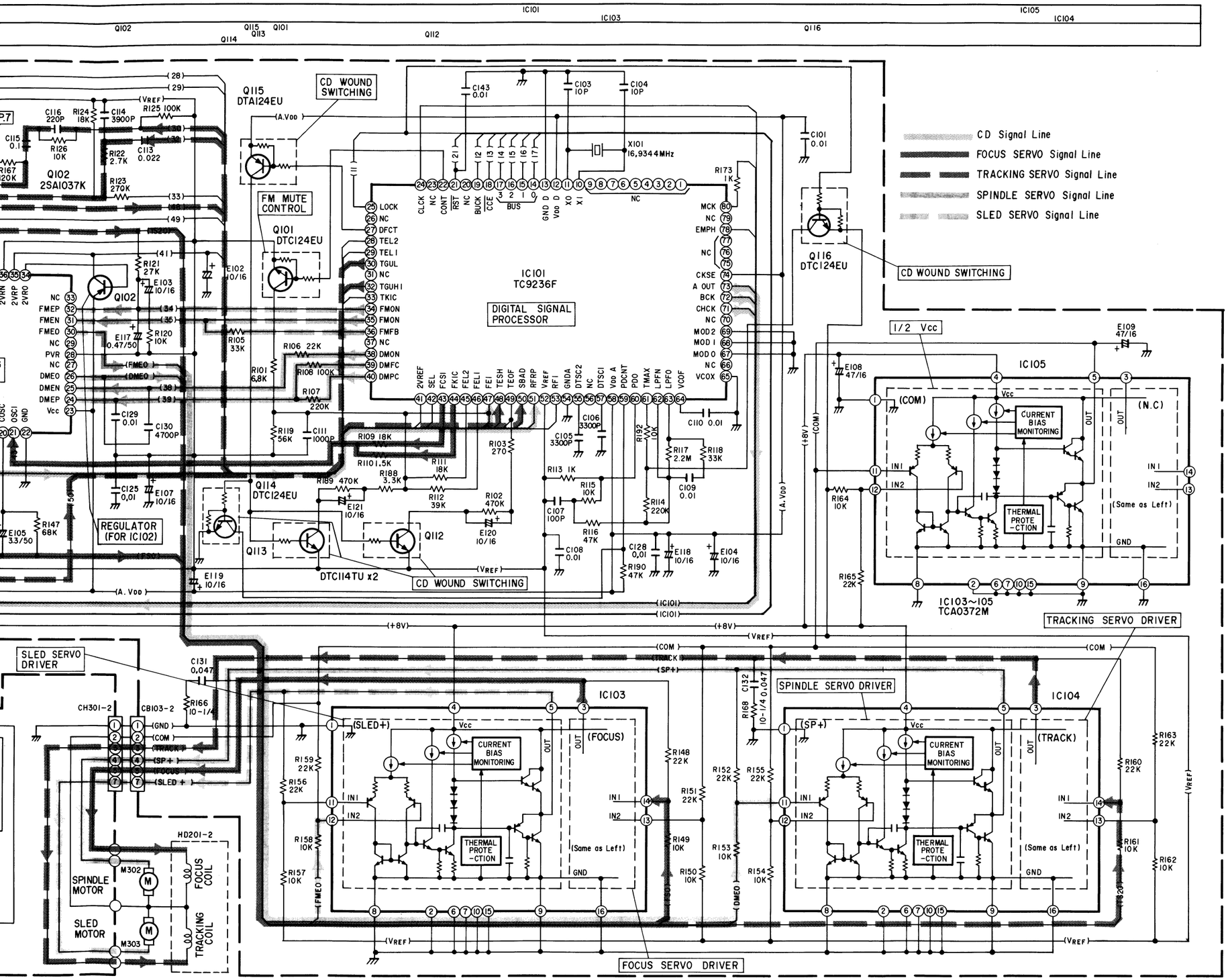
CURRENT BIAS MONITORING

THERMAL PROTE-CTION

(Same as Left)

FOCUS SERVO DRIVER

SPINDLE SERVO DRIVER



IC101

1	4.8V	17	PULSE	33	1.6V	49	0V	65	0V
2	4.8V	18	PULSE	34	2.1V	50	0V	66	PULSE
3	PULSE	19	PULSE	35	0V	51	0V	67	0V
4	PULSE	20	PULSE	36	2V	52	0V	68	0V
5	PULSE	21	4.9V	37	4.8V	53	0V	69	0V
6	PULSE	22	0V	38	0V	54	0V	70	PULSE
7	PULSE	23	PULSE	39	PULSE	55	0V	71	PULSE
8	PULSE	24	0V	40	PULSE	56	0V	72	PULSE
9	PULSE	25	5V	41	4.2V	57	PULSE	73	PULSE
10	0.8V	26	4.8V	42	5V	58	5V	74	5V
11	PULSE	27	PULSE	43	2.4V	59	PULSE	75	0V
12	5V	28	2V	44	0V	60	PULSE	76	4.8V
13	0V	29	2V	45	0V	61	0V	77	0V
14	PULSE	30	2.1V	46	PULSE	62	0V	78	0V
15	PULSE	31	0V	47	0V	63	0V	79	4.8V
16	PULSE	32	2.1V	48	0V	64	0V	80	PULSE

IC102

1	1.7V	12	PULSE	23	5V	34	4.4V
2	2V	13	2.7V	24	PULSE	35	0V
3	2V	14	2V	25	2.1V	36	2.1V
4	2V	15	PULSE	26	PULSE	37	PULSE
5	2V	16	4.9V	27	PULSE	38	2V
6	3.9V	17	0V	28	2.1V	39	2V
7	0.1V	18	PULSE	29	2.1V	40	PULSE
8	2.1V	19	PULSE	30	2V	41	2V
9	PULSE	20	PULSE	31	2V	42	2.1V
10	PULSE	21	2.4V	32	2.1V	43	2.1V
11	2.1V	22	0V	33	PULSE	44	2.1V

IC103

1	0V
2	0V
3	PULSE
4	8.5V
5	4V
6	0V
7	0V
8	0V
9	0V
10	0V
11	2.6V
12	2.6V
13	2.6V
14	2.6V
15	0V
16	0V

IC104

1	0V
2	0V
3	PULSE
4	8.5V
5	PULSE
6	0V
7	0V
8	0V
9	0V
10	0V
11	2.6V
12	2.6V
13	2.6V
14	2.6V
15	0V
16	0V

IC105

1	0V
2	0V
3	0.3V
4	8.5V
5	4V
6	0V
7	0V
8	0V
9	0V
10	0V
11	4V
12	4V
13	PULSE
14	PULSE
15	0V
16	0V

	E	C	B
Q101	2.1V	2.1V	0V
Q102	5V	4.1V	4.3V
Q103	4.58V	1.8V	3.9V
Q110	2.1V	2.4V	2.4V
Q111	1.1V	1.1V	1.7V
Q112	2.1V	1.8V	0V
Q113	2.1V	1.5V	0V
Q114	2.2V	PULSE	0V
Q115	5V	0V	4.8V
Q116	0V	PULSE	0V

IC311

1	0V
2	6V
3	0V
4	0V
5	0V
6	0V
7	0V
8	0V
9	0V
10	6V

[Measuring Conditions]
- Power Supply Voltage : DC14V
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point Reference : Between Ground
- Measuring Conditions :
  CD : Be playing back the 2nd Music of the test CD (YEDS-18)
  TUNER : No signal input
  FM : 98.1MHz
  MW : 999kHz
  LW : 216kHz

NOTES:
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. P = $\frac{1}{1{,}000{,}000}$

Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.

Capacitor : μF = microfarads, pF = picofarads

Abbreviations

RES. =	Resistor	CAP. =	Capacitor
C.F. =	Carbon Film	ELY. =	Electrolytic
M.F. =	Metal Film	CER. =	Ceramic
M.O. =	Metal Oxide Film	MYL. =	Mylar
M.P. =	Metal Plate	TAN. =	Tantalum
TR. =	Transistor	POLY. =	Polystyrol
TRANS. =	Transformer	PP. =	Polypropylene
CP. =	Chip	PLT. =	Polyethylene
		PF. =	Polyester Film

Main P. C. Board

IC's

	Symbol No.	Part No.	Description
	IC001	51T40941U03	MC14066BFL1
	IC002	51T15853W02	LC7218M
○	IC003	51T35087W02	35087W02
△	IC003	51T35087W04	35087W04
	IC006	51T94316F02	AN7465S
○	IC007	51T94121F01	BA4558F
○	or	51T93336F01	NJM4558M
○	IC008	51T93332F01	NJM2903M
	IC009	51T93333F01	NJM2904M
	IC010	51T93333F01	NJM2904M
	IC101	51T25985W01	TC9236F
	IC102	51T25984W01	TA8191F
	IC103	51T15264W01	TCA0372M
	IC104	51T15264W01	TCA0372M
	IC105	51T15264W01	TCA0372M
	IC106	51T35105W02	SM5840CS
	IC107	51T25676W01	μPD6376
	IC109	51T35229W01	TC7SU04F
	IC201	51T40941U03	MC14066BFL1
	IC202	51T25154W01	BA15532F
	IC205	51T94121F01	BA4558F
	or	51T93336F01	NJM4558M
	IC206	51T93532F07	TC4S66F
	IC301	51T92001F01	BA4560F
	or	51T93338F01	NJM4560E
	IC501	51T25681W01	25681W01
	IC502	51T35086W02	μPD74HC373
	IC503	51T84723F02	LC3516AML
	or	51T90640F01	CXK5816M
	IC504	51T93532F08	TC4S30F
	IC505	51T93532F04	TC4S81F
	IC601	51T25829W01	25829W01
	IC602	51T95014F05	S-8052ALR-LF
	IC801	51T15510W01	MC34063M
	IC802	51T80338F01	NJM7805FA
	IC804	51T94121F01	BA4558F
	or	51T93336F01	NJM4558M

Transistors

	Symbol No.	Part No.	Description
	Q001	48T94606F03	CP., DTC124EU
	Q003	48T94606F06	CP., DTC114EU
	Q004	48T73888F13	CP., FMC3
	Q005	48T94606F03	CP., DTC124EU
	Q006	48T90181F05	2SD1993
	Q007	48T90181F05	2SD1993
	Q008	48T90181F05	2SD1993
	Q009	48T90181F05	2SD1993
	Q010	48T73888F09	CP., FMG2
	Q012	48T52438F01	CP., 2SD601A
	Q013	48T84234F03	2SB1238
	Q014	48T94606F06	CP., DTC114EU
	Q015	48T84234F03	2SB1238
	Q016	48T15289W03	2SD2008Q
	Q017	48T83415F03	2SD1858
	Q018	48T73888F13	CP., FMC3
	Q023	48T73888F10	CP., FMG4
	Q024	48T73888F10	CP., FMG4
	Q031	48T94606F03	CP., DTC124EU
	Q033	48T94606F05	CP., DTC114TU
	Q034	48T94606F05	CP., DTC114TU
	Q035	48T94606F53	CP., DTA124EU
	Q036	48T94606F03	CP., DTC124EU
	Q037	48T94606F53	CP., DTA124EU
	Q038	48T94606F05	CP., DTC114TU
△	Q040	48T94606F62	CP., DTA144TU
	Q041	48T94606F03	CP., DTC124EU
	Q042	48T73888F09	CP., FMG2
	Q043	48T94606F03	CP., DTC124EU
△	Q044	48T52438F01	CP., 2SD601A
△	Q045	48T63420F01	CP., 2SA1037K
	Q101	48T94606F03	CP., DTC124EU
	Q102	48T63420F01	CP., 2SA1037K
	Q103	48T84238F03	2SB1240
	Q104	48T84238F03	2SB1240
	Q105	48T81552F01	CP., 2SD1383K
	Q106	48T94606F03	CP., DTC124EU
	Q107	48T94606F53	CP., DTA124EU
	Q108	48T94606F03	CP., DTC124EU
	Q110	48T94606F06	CP., DTC114EU
	Q111	48T63417F01	CP., 2SC2412K
	Q112	48T94606F05	CP., DTC114TU
	Q113	48T94606F05	CP., DTC114TU

Notes : ○ : Serial Number between No.10718001B and No.10920500B Model Only,
△ : Serial Number after No.11021001M Model Only, Others : Common.

Symbol No.	Part No.	Description
Q114	48T94606F03	CP., DTC124EU
Q115	48T94606F53	CP., DTA124EU
Q116	48T94606F03	CP., DTC124EU
Q201	48T63788F04	CP., 2SD1328
Q202	48T63788F04	CP., 2SD1328
Q503	48T94606F03	CP., DTC124EU
Q504	48T94606F11	CP., DTC124TU
Q510	48T94606F53	CP., DTA124EU
Q511	48T94606F03	CP., DTC124EU
Q512	48T94606F53	CP., DTA124EU
Q601	48T94606F03	CP., DTC124EU
Q602	48T94606F03	CP., DTC124EU
Q603	48T94606F03	CP., DTC124EU
Q606	48T63419F01	CP., 2SA1036K
Q607	48T94606F03	CP., DTC124EU
Q609	48T94606F03	CP., DTC124EU
Q610	48T94606F03	CP., DTC124EU
Q611	48T94606F03	CP., DTC124EU
Q614	48T94606F53	CP., DTA124EU
Q615	48T94606F03	CP., DTC124EU
Q616	48T94606F03	CP., DTC124EU
Q620	48T94606F06	CP., DTC114EU
Q621	48T81552F01	CP., 2SD1383K
Q801	48T15511W02	CP., 2SB1261
Q802	48T94606F53	CP., DTA124EU
Q803	48T94606F03	CP., DTC124EU
Q810	48T56031F01	2SD1266
Q811	48T94606F03	CP., DTC124EU

Diodes

D001	48T95117F01	CP., MA713
D003	48T52446F01	CP., MA151WK
D005	48T94608F03	CP., DAN202U
D008	48T94608F03	CP., DAN202U
D101	48T15512W01	CP., DSM10
D102	48T94608F03	CP., DAN202U
D103	48T94608F03	CP., DAN202U
D104	48T94608F03	CP., DAN202U
D601	48T94608F03	CP., DAN202U
D602	48T95117F01	CP., MA713
D605	48T94608F03	CP., DAN202U
D609	48T52446F01	CP., MA151WK
D610	48T94608F03	CP., DAN202U
D611	48T94608F03	CP., DAN202U
D802	48T81044F01	10E2
D803	48T15702W01	CP., SB05-05CP
D804	48T94608F01	CP., DA204U
ZD001	48T62934F19	Zener, CP. RD5.1MB2
ZD002	48T25766W25	Zener, HZS9C2L
ZD003	48T25766W01	Zener, HZS6A1L
ZD004	48T25766W25	Zener, HZS9C2L
ZD500	48T45012W07	Zener, MTZJ2.7A
ZD603	48T25801W12	Zener, HZS5CLL
ZD802	48T62934F49	Zener, CP. RD13MB2
ZD803	48T25766W24	Zener, HZS9C1L
ZD804	48T25801W11	Zener, HZS5BLL

Buzzer / Thermistor

BZ601	50T25148W01	CB13PA-X
TH601	48T93439F06	Thermistor, 100K ohm

Coils

△	L001	24T25798W13	Inductor, 1mH
	L801	24T16271W13	RCR875D 220μH
	L802	24T16271W13	RCR875D 220μH

Crystals

X001	91T25773W43	7.2MHz
X002	91T25773W44	CER. Lock, 7.372MHz
X003	91T15857W01	CER. Lock, 456kHz
X101	91T25806W92	16.9344MHz
X601	91T25773W42	7.15909MHz

Capacitors

C001	08S65128F69	CP.,	0.01μF
E001	23S61523F29	ELY.,	1μF/50V
C002	08S65128F69	CP.,	0.01μF
E002	23S61523F13	ELY.,	22μF/16V
C003	08S65128F73	CP.,	0.033μF
C004	08T15399W02	CP.,	0.033μF
E004	23T74437F46	TAN.,	0.33μF/35V
C005	08T15399W02	CP.,	0.033μF
C006	08T90316F29	TF,	0.1μF
E006	23S61523F34	ELY.,	100μF/10V
C007	08S65128F61	CP.,	2200pF
E007	23S61523F05	ELY.,	22μF/6.3V
C008	08T90316F17	TF,	0.01μF
E008	23T25149W05	ELY.,	1μF/50V
C009	08S65128F69	CP.,	0.01μF
E009	23T25149W05	ELY.,	1μF/50V
C010	08S65128F72	CP.,	0.022μF
E010	23S61523F15	ELY.,	47μF/16V
E011	23S61523F12	ELY.,	10μF/16V
E012	23S61523F13	ELY.,	22μF/16V

Notes : ○ : Serial Number between No.10718001B and No.10920500B Model Only,
△ : Serial Number after No.11021001M Model Only, Others : Common.

	Symbol No.	Part No.	Description
	C013	08S65128F69	CP., 0.01μF
	E013	23S61523F25	ELY., 0.1μF/50V
	C014	08S65128F69	CP., 0.01μF
	E014	23S61523F26	ELY., 0.22μF/50V
	C015	08S65128F69	CP., 0.01μF
	E015	23S61523F29	ELY., 1μF/50V
	C016	08T90316F23	TF, 0.033μF
	E016	23S61523F17	ELY., 4.7μF/25V
	C017	08S65128F69	CP., 0.01μF
	E017	23S61523F25	ELY., 0.1μF/50V
	C018	08S65128F69	CP., 0.01μF
	C019	08S82122F23	CP., 27pF
	C020	08S82122F23	CP., 27pF
	E020	23S61523F12	ELY., 10μF/16V
	C021	08S65128F69	CP., 0.01μF
	E021	23S61523F25	ELY., 0.1μF/50V
	C022	08S65128F69	CP., 0.01μF
	E022	23S61523F12	ELY., 10μF/16V
○	E023	23S61523F12	ELY., 10μF/16V
	C024	08S65128F67	CP., 6800pF
	E024	23S61523F12	ELY., 10μF/16V
	C025	08T52448F03	PP., 390pF
	E025	23S61523F25	ELY., 0.1μF/50V
	C026	08S65128F67	CP., 6800pF
○	E026	23S61523F29	ELY., 1μF/50V
	C027	08S65128F67	CP., 6800pF
○	E027	23S61523F29	ELY., 1μF/50V
	C028	08S65128F69	CP., 0.01μF
△	E028	23S61523F29	ELY., 1μF/50V
	C029	08S65128F51	CP., 470pF
	C030	08S65128F69	CP., 0.01μF
	C031	08S65128F63	CP., 3300pF
	C032	08T15399W03	CP., 0.047μF
	C033	08T15399W03	CP., 0.047μF
○	E033	23S61523F12	ELY., 10μF/16V
	C034	08S65128F65	CP., 4700pF
	E034	23S61523F12	ELY., 10μF/16V
	C035	08S65128F65	CP., 4700pF
	E035	23S61523F17	ELY., 4.7μF/25V
	C036	08T15399W01	CP., 0.022μF
	C040	23T82372F19	ELY., (B.P) 2.2μF/50V
	E040	23S61523F29	ELY., 1μF/50V
	C041	08S65128F72	CP., 0.022μF
△	C042	08S65128F69	CP., 0.01μF
△	C043	08S65128F69	CP., 0.01μF
△	C044	08S65128F61	CP., 2200pF
△	C045	08S65128F69	CP., 0.01μF
	C046	08S65128F57	CP., 1000pF
	C050	08S65128F65	CP., 4700pF
	C053	08S65128F69	CP., 0.01μF
	C101	08S65128F69	CP., 0.01μF

Symbol No.	Part No.	Description
E101	23S61523F08	ELY., 100μF/6.3V
E102	23T74437F32	TAN., 10μF/16V
C103	08S82122F13	CP., 10pF
E103	23S61523F12	ELY., 10μF/16V
C104	08S82122F13	CP., 10pF
E104	23T74437F32	TAN., 10μF/16V
C105	08S65128F63	CP., 3300pF
E105	23S61523F31	ELY., 3.3μF/50V
C106	08S65128F63	CP., 3300pF
E106	23T25149W09	ELY., 10μF/16V
C107	08S65128F35	CP., 100pF
E107	23T74437F32	TAN., 10μF/16V
C108	08S65128F69	CP., 0.01μF
E108	23S61523F15	ELY., 47μF/16V
C109	08S65128F69	CP., 0.01μF
E109	23S61523F15	ELY., 47μF/16V
C110	08S65128F69	CP., 0.01μF
E110	23S61523F17	ELY., 4.7μF/25V
C111	08S65128F57	CP., 1000pF
E111	23T25149W17	ELY., 47μF/6.3V
E112	23T25149W17	ELY., 47μF/6.3V
C113	08T15399W01	CP., 0.022μF
E113	23T25149W09	ELY., 10μF/16V
C114	08S65128F64	CP., 3900pF
E114	23T25149W09	ELY., 10μF/16V
C115	08T15807W05	CP., 0.1μF
C116	08S65128F43	CP., 220pF
C117	08S65128F62	CP., 2700pF
E117	23S61523F28	ELY., 0.47μF/50V
C118	08T15399W03	CP., 0.047μF
E118	23T74437F32	TAN., 10μF/16V
C119	08S65128F29	CP., 56pF
E119	23T74437F32	TAN., 10μF/16V
C120	08S65128F69	CP., 0.01μF
E120	23S61523F12	ELY., 10μF/16V
C121	08S65128F13	CP., 12pF
E121	23S61523F12	ELY., 10μF/16V
C122	08S53332F47	CP., 0.01μF
C123	08T15807W05	CP., 0.1μF
C124	08S82122F06	CP., 3pF
C125	08S65128F69	CP., 0.01μF
C126	08T15807W05	CP., 0.1μF
C127	08T15807W05	CP., 0.1μF
C128	08S65128F69	CP., 0.01μF
E128	23T74437F32	TAN., 10μF/16V
C129	08S65128F69	CP., 0.01μF
C130	08S65128F65	CP., 4700pF
C131	08S65128F74	CP., 0.047μF
C132	08S65128F74	CP., 0.047μF
C133	08S65128F69	CP., 0.01μF
C135	08S65128F69	CP., 0.01μF

Notes : ○ : Serial Number between No.10718001B and No.10920500B Model Only,
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Symbol No.	Part No.	Description
C136	08S65128F12	CP., 10pF
C140	08S53332F43	CP., 4700pF
C141	08T15807W05	CP., 0.1μF
E141	23T74437F32	TAN., 10μF/16V
C142	08S65128F60	CP., 1800pF
C143	08S65128F69	CP., 0.01μF
C201	08S65128F25	CP., 39pF
E201	23T25149W09	ELY., 10μF/16V
C202	08S65128F25	CP., 39pF
E202	23T25149W09	ELY., 10μF/16V
C203	08S82122F21	CP., 22pF
C204	08S82122F21	CP., 22pF
C205	08S82122F49	CP., 330pF
C206	08S82122F59	CP., 330pF
C207	08S82122F59	CP., 820pF
C208	08S82122F59	CP., 820pF
E208	23T74437F32	TAN., 10μF/16V
E212	23T25149W09	ELY., 10μF/16V
C301	08S82122F57	CP., 680pF
C302	08S82122F57	CP., 680pF
C303	08S82122F45	CP., 220pF
E303	23T74437F32	TAN., 10μF/16V
C304	08S82122F45	CP., 220pF
E304	23T74437F32	TAN., 10μF/16V
E305	23T25149W09	ELY., 10μF/16V
C502	08S53332F57	CP., 0.1μF
E502	23S61523F08	ELY., 100μF/6.3V
C503	08S65128F76	CP., 0.1μF
C504	08S65128F35	CP., 100pF
C505	08S65128F35	CP., 100pF
E505	23T74437F47	TAN., 0.47μF/35V
C506	08S65128F35	CP., 100pF
E506	23T74437F47	TAN., 0.47μF/35V
C510	08S82122F23	CP., 27pF
C511	08S82122F23	CP., 27pF
C512	08S65128F43	CP., 220pF
C520	08S65128F74	CP., 0.047μF
E601	23T74437F32	TAN., 10μF/16V
E602	23S61523F08	ELY., 100μF/6.3V
C603	08S65128F65	CP., 4700pF
C604	08S65128F35	CP., 100pF
C605	08S65128F35	CP., 100pF
E605	23S61523F28	ELY., 0.47μF/50V
C606	08S65128F69	CP., 0.01μF
E606	23S61523F12	ELY., 10μF/16V
E607	23S61523F12	ELY., 10μF/16V
C608	08S65128F69	CP., 0.01μF
C610	08S82122F23	CP., 27pF
E610	23S61523F12	ELY., 10μF/16V
C611	08S82122F23	CP., 27pF
C801	08S65128F76	CP., 0.1μF

Symbol No.	Part No.	Description
E801	23T25364W01	ELY., 1000μF/16V
C802	08S65128F37	CP., 120pF
E802	23S61523F15	ELY., 47μF/16V
E803	23S61523F12	ELY., 10μF/16V
C804	08S65128F69	CP., 0.01μF
E804	23T25051W20	ELY., 470μF/10V
E805	23T74437F49	TAN., 1μF/35V
C806	08S65128F57	CP., 1000pF
C807	08S65128F69	CP., 0.01μF
E809	23S61523F12	ELY., 10μF/16V
E810	23S61523F12	ELY., 10μF/16V
E811	23S61523F34	ELY., 100μF/10V
E812	23S61523F12	ELY., 10μF/16V
E813	23S61523F08	ELY., 100μF/6.3V
E818	23T25149W17	ELY., 47μF/6.3V

Resistors (All resistors are chip 1/10W ± 5% unless otherwise noted.)

R001	06S64995F53	1K ohm
R002	06S64995F53	1K ohm
R003	06S64995F77	10K ohm
R004	06S64995F37	220 ohm
R005	06S64995F53	1K ohm
R006	06S64995F65	3.3K ohm
R007	06S64995F05	10 ohm
R008	06S64995F75	8.2K ohm
R009	06S64995F71	5.6K ohm
R010	06S64995F53	1K ohm
R011	06S64996F02	100K ohm
R012	06S64995F53	1K ohm
R013	06S64995F71	5.6K ohm
R014	06S64995F85	22K ohm
R015	06S64995F53	1K ohm
R016	06S64995F47	560 ohm
R017	06S64995F93	47K ohm
R018	06S64995F73	6.8K ohm
R019	06S64995F73	6.8K ohm
R020	06S64996F02	100K ohm
R021	06S64996F02	100K ohm
R022	06S64995F65	3.3K ohm
R023	06T70072F53	1K ohm 1/4W
R024	06T70072F65	3.3K ohm 1/4W
R025	06T70072F65	3.3K ohm 1/4W
R026	06T70072F53	1K ohm 1/4W
R027	06S64995F65	3.3K ohm
R028	06S64996F18	470K ohm
R029	06T70072F05	10 ohm 1/4W
R030	06S64996F08	180K ohm

	Symbol No.	Part No.	Description
	R031	06S64995F79	12K ohm
	R032	06S64995F65	3.3K ohm
	R033	06S64995F85	22K ohm
	R034	06S64995F93	47K ohm
	R035	06S64995F77	10K ohm
	R036	06S64995F79	12K ohm
	R037	06S64995F79	12K ohm
	R038	06S64995F81	15K ohm
	R039	06S64995F65	3.3K ohm
	R040	06S64995F69	4.7K ohm
	R041	06S64996F26	1M ohm
	R042	06S64995F57	1.5K ohm
	R043	06S64995F77	10K ohm
	R045	06S64996F02	100K ohm
	R046	06S64995F81	15K ohm
	R049	06S64995F65	3.3K ohm
	R050	06S64995F65	3.3K ohm
	R051	06S64995F77	10K ohm
	R052	06S64995F77	10K ohm
	R054	06S64996F14	330K ohm
	R055	06S64995F41	330 ohm
	R056	06S64996F02	100K ohm
	R057	06S64996F02	100K ohm
	R058	06S64995F84	20K ohm
	R059	06S64995F53	1K ohm
	R060	06S64995F53	1K ohm
○	R061	06S64996F22	680K ohm
○	R062	06S64996F22	680K ohm
○	R063	06S64996F02	100K ohm
○	R064	06S64996F02	100K ohm
	R065	06S64995F85	22K ohm
	R066	06S64995F77	10K ohm
	R067	06S64995F81	15K ohm
	R069	06S64996F02	100K ohm
	R070	06T70072F29	100 ohm 1/4W
	R072	06S64995F77	10K ohm
	R073	06S64995F77	10K ohm
	R074	06S64995F77	10K ohm
	R075	06S64995F77	10K ohm
	R076	06S64995F53	1K ohm
	R077	06S64995F53	1K ohm
	R078	06S64995F65	3.3K ohm
	R080	06S53330F93	47K ohm 1/8W
	R087	06S53330F95	56K ohm 1/8W
○	R088	06S64996F26	1M ohm
○	R089	06S64996F26	1M ohm
○	R090	06S64995F76	9.1K ohm
○	R091	06S64995F77	10K ohm
○	R092	06S64995F76	9.1K ohm
○	R093	06S64995F77	10K ohm
	R094	06S64995F77	10K ohm

Symbol No.	Part No.	Description
R097	06S64995F77	10K ohm
R098	06S64995F81	15K ohm
R099	06S64995F81	15K ohm
R101	06S64995F73	6.8K ohm
R102	06S64996F18	470K ohm
R103	06S64995F39	270 ohm
R105	06S64995F89	33K ohm
R106	06S64995F85	22K ohm
R107	06S64996F10	220K ohm
R108	06S64996F02	100K ohm
R109	06S64995F83	18K ohm
R110	06S64995F57	1.5K ohm
R111	06S64995F83	18K ohm
R112	06S64995F91	39K ohm
R113	06S64995F53	1K ohm
R114	06S64996F10	220K ohm
R115	06S64995F77	10K ohm
R116	06S64995F93	47K ohm
R117	06S64996F30	2.2M ohm
R118	06S64995F89	33K ohm
R119	06S64995F95	56K ohm
R120	06S64995F77	10K ohm
R121	06S64995F87	27K ohm
R122	06S64995F63	2.7K ohm
R123	06S64996F12	270K ohm
R124	06S64995F83	18K ohm
R125	06S64996F02	100K ohm
R126	06S64995F77	10K ohm
R127	06S64996F04	120K ohm
R128	06S64996F02	100K ohm
R129	06S64995F81	15K ohm
R130	06S64995F85	22K ohm
R131	06S64995F77	10K ohm
R132	06S64995F77	10K ohm
R133	06S64995F77	10K ohm
R134	06S64996F20	560K ohm
R135	06S64996F02	100K ohm
R136	06S64995F61	2.2K ohm
R137	06S64995F77	10K ohm
R138	06S64995F69	4.7K ohm
R139	06S64995F69	4.7K ohm
R140	06S64995F69	4.7K ohm
R141	06T70072F05	10 ohm 1/4W
R144	06S64995F53	1K ohm
R145	06S64995F47	560 ohm
R146	06S64995F81	15K ohm
R147	06S64995F97	68K ohm
R148	06S64995F85	22K ohm
R149	06S64995F77	10K ohm
R150	06S64995F77	10K ohm
R151	06S64995F85	22K ohm

Notes : ○ : Serial Number between No.10718001B and No.10920500B Model Only,
△ : Serial Number after No.11021001M Model Only, Others : Common.

Symbol No.	Part No.	Description
R152	06S64995F85	22K ohm
R153	06S64995F77	10K ohm
R154	06S64995F77	10K ohm
R155	06S64995F85	22K ohm
R156	06S64995F85	22K ohm
R157	06S64995F77	10K ohm
R158	06S64995F77	10K ohm
R159	06S64995F85	22K ohm
R160	06S64995F85	22K ohm
R161	06S64995F77	10K ohm
R162	06S64995F77	10K ohm
R163	06S64995F85	22K ohm
R164	06S64995F77	10K ohm
R165	06S64995F85	22K ohm
R166	06T70072F05	10 ohm 1/4W
R167	06S64996F04	120K ohm
R168	06T70072F05	10 ohm 1/4W
R169	06S64995F53	1K ohm
R170	06S64995F53	1K ohm
R171	06S64995F53	1K ohm
R172	06S64995F53	1K ohm
R173	06S64995F53	1K ohm
R174	06S64995F77	10K ohm
R175	06S64995F77	10K ohm
R176	06T70072F53	1K ohm 1/4W
R177	06S64996F18	470K ohm
R179	06S64995F63	2.7K ohm
R180	06S53330F77	10K ohm 1/8W
R181	06S53331F02	100K ohm 1/8W
R183	06S64996F10	220K ohm
R185	06S64995F83	18K ohm
R186	06S64995F53	1K ohm
R187	06S64995F53	1K ohm
R188	06S64995F65	3.3K ohm
R189	06S64996F18	470K ohm
R190	06S64995F93	47K ohm
R191	06S64995F85	22K ohm
R192	06S64995F77	10K ohm
R201	06S64996F08	180K ohm
R202	06S64996F08	180K ohm
R203	06S64995F79	12K ohm
R204	06S64995F79	12K ohm
R205	06T70072F61	2.2K ohm 1/4W
R206	06T70072F61	2.2K ohm 1/4W
R207	06S64995F37	220 ohm
R223	06S64995F93	47K ohm
R224	06S64995F93	47K ohm
R225	06S64995F83	18K ohm
R226	06S64995F83	18K ohm
R227	06S64996F02	100K ohm
R228	06S64996F02	100K ohm

Symbol No.	Part No.	Description
R301	06S64995F89	33K ohm
R302	06S64995F89	33K ohm
R303	06S64995F72	6.2K ohm
R304	06S64995F72	6.2K ohm
R305	06S64995F83	18K ohm
R306	06S64995F83	18K ohm
R309	06S64995F77	10K ohm
R310	06S64995F77	10K ohm
R501	06S64996F26	1M ohm
R502	06S64995F93	47K ohm
R503	06S64995F93	47K ohm
R505	06S64995F69	4.7K ohm
R506	06S64996F02	100K ohm
R507	06S64995F69	4.7K ohm
R508	06S53330F69	4.7K ohm 1/8W
R510	06S64995F93	47K ohm
R511	06S64995F93	47K ohm
R516	06S64996F02	100K ohm
R601	06S64995F73	6.8K ohm
R602	06S64995F69	4.7K ohm
R603	06S64995F69	4.7K ohm
R604	06S64996F02	100K ohm
R605	06S64996F02	100K ohm
R606	06S64996F02	100K ohm
R607	06S64996F02	100K ohm
R608	06S64995F75	8.2K ohm
R609	06S64995F75	8.2K ohm
R616	06S64995F77	10K ohm
R617	06S64995F61	2.2K ohm
R618	06S64995F85	22K ohm
R630	06S64995F77	10K ohm
R631	06S64996F02	100K ohm
R632	06T70072F61	2.2K ohm 1/4W
R633	06T70072F53	1K ohm 1/4W
R634	06T70072F05	10 ohm 1/4W
R637	06S64995F65	3.3K ohm
R638	06S64996F18	470K ohm
R639	06S64995F93	47K ohm
R640	06S64995F85	22K ohm
R641	06S64995F61	2.2K ohm
R642	06S64995F77	10K ohm
R643	06S64995F85	22K ohm
R701	06S64996F20	560K ohm
R702	06S64996F26	1M ohm
R703	06S64995F77	10K ohm
R704	06S64995F77	10K ohm
R705	06S64995F77	10K ohm
R708	06S64995F51	820 ohm
△ R709	06S64995F91	39K ohm
△ R710	06S64996F04	120K ohm

Notes : ○ : Serial Number between No.10718001B and No.10920500B Model Only,
△ : Serial Number after No.11021001M Model Only, Others : Common.

Symbol No.	Part No.	Description
△ R711	06S64995F21	47 ohm
△ R712	06S64996F02	100K ohm
△ R713	06S64996F02	100K ohm
△ R714	06S64995F75	8.2K ohm
R801	06T70072F29	100 ohm 1/4W
R802	06T70072F47	560 ohm 1/4W
R803	06T70072F47	560 ohm 1/4W
R804	06S64995F63	2.7K ohm
R805	06S64995F82	16K ohm
R810	06T70072F33	150 ohm 1/4W
R822	06S64996F02	100K ohm
R823	06S64995F77	10K ohm
R824	06S64995F77	10K ohm
R825	06S64995F65	3.3K ohm
R826	06S64996F02	100K ohm
R827	06T70072F61	2.2K ohm 1/4W
R828	06S64995F93	47K ohm
R829	06T70072F53	1K ohm 1/4W
VR002	18T45040F11	Variable, 4.7K ohm
VR003	18T42748F09	Variable, 2.2K ohm
VR004	18T45040F14	Variable, 15K ohm
VR005	18T42748F15	Variable, 22K ohm
VR101	18T15805W20	Volume, Metal 150K ohm
VR102	18T10024W14	Variable, 15K ohm
VR103	18T10024W09	Variable, 2.2K ohm
VR201, S601	18T15283W03	Volume, Rotary (VOLUME / TREBLE / BASS / FADER / POWER SWITCH)
VR202	18T25095W03	Volume, Metal 470 ohm

Front P. C. Board

IC's

IC251	51T25576W04	NJM4580E
IC401	51T25797W01	μPD7228AG
IC402	51T15268W06	L78LR05GFA

Transistors

Q401	48T62967F03	CP., DTC124K
Q402	48T94606F03	CP., DTC124EU
Q403	48T62967F03	CP., DTC124K
Q404	48T73023F01	2SD874A

Symbol No.	Part No.	Description
Diode / Thermistor		
ZD401	48T62934F38	Zener, CP. RD9.1HB3
TH401	48T93439F03	Thermistor, 10K ohm
Lamps		
PL401	65T95083F01	Pilot, 6.7V-85mA
PL402	65T25170W06	6V-70mA
PL403	65T25170W06	6V-70mA
PL404	65T25170W06	6V-70mA
PL405	65T25170W06	6V-70mA
LED's		
LD401	48T16167W02	MBG4868K (GRN)
LD402	48T16167W02	MBG4868K (GRN)
LD403	48T16167W02	MBG4868K (GRN)
LD404	48T16167W02	MBG4868K (GRN)
LD405	48T16167W02	MBG4868K (GRN)
LD406	48T16167W02	MBG4868K (GRN)
Switches		
S401	40T10876W12	Tact, SKHLAJ (⏭ · UP)
S402	40T10876W12	Tact, SKHLAJ (TUNE)
S403	40T10876W12	Tact, SKHLAJ (A.P.I.)
S404	40T10876W12	Tact, SKHLAJ (T.INFO)
S405	40T10876W12	Tact, SKHLAJ (DX)
S406	40T10876W12	Tact, SKHLAJ (D.A.P.)
S407	40T10876W12	Tact, SKHLAJ (TUNER · BAND)
S408	40T10876W12	Tact, SKHLAJ (EJECT)
S409	40T10876W12	Tact, SKHLAJ (⏮ · DN)
S410	40T10876W12	Tact, SKHLAJ (M1 / CLEAR)
S411	40T10876W12	Tact, SKHLAJ (M2 / P.T.M.)
S412	40T10876W12	Tact, SKHLAJ (M3 / O.T.M.)
S413	40T10876W12	Tact, SKHLAJ (M4 / M.I.X.)
S414	40T10876W12	Tact, SKHLAJ (M5 / REPEAT)
S415	40T10876W12	Tact, SKHLAJ (M6 / SCAN)
S416	40T10876W12	Tact, SKHLAJ (DISC ▶ / II)
S417	40T10876W12	Tact, SKHLAJ (RESET)

Notes : ○ : Serial Number between No.10718001B and No.10920500B Model Only,
△ : Serial Number after No.11021001M Model Only, Others : Common.

Symbol No.	Part No.	Description
Capacitors		
C251	08T90316F15	TF, 6800pF
E251	23S61523F12	ELY., 10μF/16V
C252	08T90316F15	TF, 6800pF
C253	08S82122F37	CP., 100pF
C254	08S82122F37	CP., 100pF
C255	08S82122F21	CP., 22pF
C256	08S82122F21	CP., 22pF
C257	08T90316F22	TF, 0.027μF
C258	08T90316F22	TF, 0.027μF
C401	08T81833F03	CP., 1μF
C402	08T81833F03	CP., 1μF
C404	08S65128F69	CP., 0.01μF
C405	08S65128F69	CP., 0.01μF
C406	08S65128F69	CP., 0.01μF
C407	08S65128F69	CP., 0.01μF
C408	08S65128F69	CP., 0.01μF
C409	08S65128F69	CP., 0.01μF
Resistors (All resistors are chip 1/10W ± 5% unless otherwise noted.)		
R251	06S64995F53	1K ohm
R252	06S64995F53	1K ohm
R253	06S64995F77	10K ohm
R254	06S64995F77	10K ohm
R255	06S64995F77	10K ohm
R256	06S64995F77	10K ohm
R257	06S64996F26	1M ohm
R258	06S64996F26	1M ohm
R259	06S64995F53	1K ohm
R260	06S64995F53	1K ohm
R401	06T70072F17	33 ohm 1/4W
R403	06S64995F77	10K ohm
R404	06S64995F77	10K ohm
R405	06S64995F77	10K ohm
R406	06S64995F77	10K ohm
R407	06S64995F77	10K ohm
R408	06S64995F99	82K ohm
R409	06T70072F17	33 ohm 1/4W
R410	06T70072F15	27 ohm 1/4W
R411	06T70072F41	330 ohm 1/4W
R412	06T70072F41	330 ohm 1/4W
R413	06T70072F14	24 ohm 1/4W
R414	06T70072F23	56 ohm 1/4W
R415	06S53330F89	33K ohm 1/8W
R416	06S64995F77	10K ohm

Symbol No.	Part No.	Description
R417	06S64995F71	5.6K ohm
R418	06S64995F65	3.3K ohm
R419	06S64995F61	2.2K ohm
R420	06S64995F57	1.5K ohm
R421	06S64995F55	1.2K ohm
R422	06S64995F89	33K ohm
R423	06S64995F77	10K ohm
R424	06S64995F71	5.6K ohm
R425	06S64995F65	3.3K ohm
R426	06S64995F61	2.2K ohm
R427	06S64995F57	1.5K ohm
R428	06S64995F55	1.2K ohm
R429	06S64995F77	10K ohm
R430	06T70072F23	56 ohm 1/4W
R432	06T70072F43	390 ohm 1/4W
R435	06T70072F37	220 ohm 1/4W
VR251 / LD251	18T16435W01	Volume, Slide 100K ohm (BASS/LED : GRN)
VR252 / LD252	18T16435W01	Volume, Slide 100K ohm (TREB/LED : GRN)

Audio/Regulator P. C. Board

IC's		
IC203	51T25154W01	BA15532F
IC204	51T92001F01	BA4560F
or	51T93338F01	NJM4560E
IC603	51T92166F02	S-8054ALO
IC803	51T90890F01	M5236ML
Transistors		
Q203	48T62967F33	CP., DTC343T
Q204	48T62967F33	CP., DTC343T
Q604	48T94606F53	CP., DTA124EU
Q605	48T63417F01	CP., 2SC2412K
Q608	48T83415F03	2SD1858
Q804	48T84238F03	2SB1240
Q805	48T84238F03	2SB1240
Q806	48T94606F53	CP., DTA124EU
Q812	48T94581F01	CP., 2SA1576
Q813	48T62967F03	CP., DTC124K
Q814	48T80611F01	CP., 2SB1132
Q815	48T80611F01	CP., 2SB1132
Q816	48T94606F03	CP., DTC124EU
Q817	48T94606F03	CP., DTC124EU
Q818	48T94606F03	CP., DTC124EU

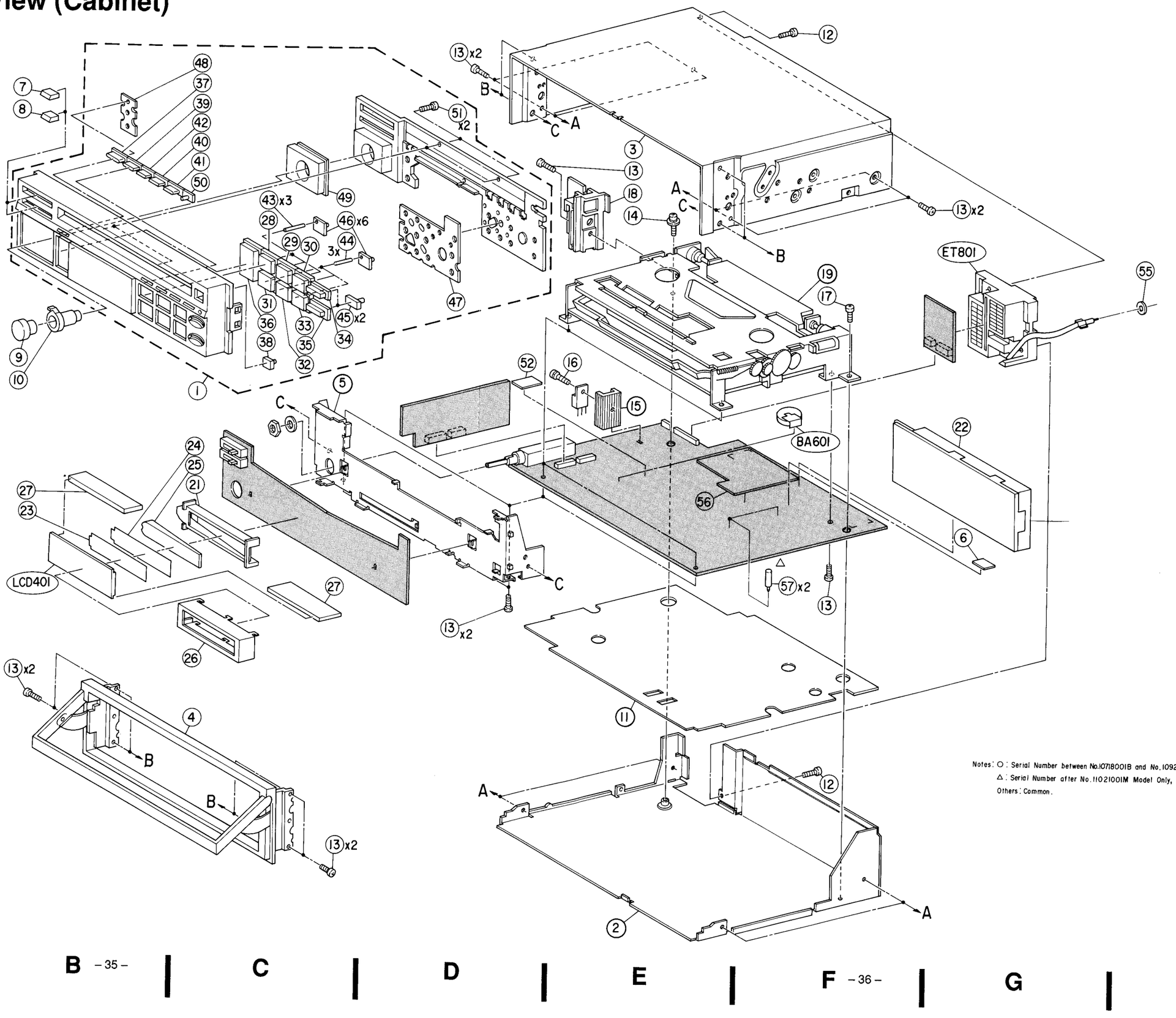
Symbol No.	Part No.	Description
Q819	48T94606F53	CP., DTA124EU
Q820	48T63420F01	CP., 2SA1037K
Q821	48T94606F03	CP., DTC124EU
Q822	48T94606F03	CP., DTC124EU
Diodes		
D603	48T52446F01	CP., MA151WK
D612	48T68828F11	1SS133
D805	48T94608F01	CP., DA204U
D806	48T15512W01	CP., DSM10
D807	48T94608F03	CP., DAN202U
D808	48T94608F03	CP., DAN202U
D809	48T94608F03	CP., DAN202U
D810	48T94608F03	CP., DAN202U
ZD601	48T62934F22	Zener, CP. RD5.6MB2
ZD602	48T25766W09	Zener, HZS6C3L
ZD805	48T62934F40	Zener, CP. RD10MB2
Capacitors		
E203	23T00180L25	ELY., 10μF / 50V
E204	23T00180L25	ELY., 10μF / 50V
E205	23T25149W09	ELY., 10μF / 16V
E206	23T25149W12	ELY., 47μF / 16V
E207	23S61523F12	ELY., 10μF / 16V
E210	23T25149W09	ELY., 10μF / 16V
E211	23T25149W12	ELY., 47μF / 16V
C601	08S65128F69	CP., 0.01μF
E603	23S61523F29	ELY., 1μF / 50V
E604	23S61523F12	ELY., 10μF / 16V
E608	23S16086W02	ELY., 330μF / 6.3V
C803	08S65128F76	CP., 0.1μF
C805	08S65128F69	CP., 0.01μF
E806	23T25149W13	ELY., 100μF / 10V
E814	23S61523F12	ELY., 10μF / 16V
E815	23S61523F28	ELY., 0.47μF / 50V
E816	23S61523F12	ELY., 10μF / 16V
E817	23S61523F12	ELY., 10μF / 16V

Symbol No.	Part No.	Description
Resistors (All resistors are chip 1/10W ± 5% unless otherwise noted.)		
R208	06S64995F77	10K ohm
R209	06S64995F85	22K ohm
R210	06S64995F85	22K ohm
R211	06S64995F77	10K ohm
R212	06S64995F77	10K ohm
R213	06S64995F91	39K ohm
R214	06S64995F91	39K ohm
R215	06S64995F37	220 ohm
R216	06S64995F37	220 ohm
R217	06S64995F53	1K ohm
R218	06S64995F53	1K ohm
R219	06S64995F53	1K ohm
R220	06S64995F53	1K ohm
R221	06S64995F85	22K ohm
R222	06S64995F85	22K ohm
R230	06S64995F77	10K ohm
R231	06S64995F85	22K ohm
R232	06S64995F85	22K ohm
R612	06S64995F77	10K ohm
R613	06T70072F65	3.3K ohm 1/4W
R614	06S64995F93	47K ohm
R615	06T70072F77	10K ohm 1/4W
R635	06S64995F77	10K ohm
R636	06S64995F99	82K ohm
R806	06T70072F37	220 ohm 1/4W
R807	06S64995F81	15K ohm
R808	06S64995F87	27K ohm
R809	06S64995F69	4.7K ohm
R811	06T70072F04	8.2 ohm 1/4W
R812	06T70072F04	8.2 ohm 1/4W
R813	06S64995F77	10K ohm
R814	06S64995F61	2.2K ohm
R815	06S64995F77	10K ohm
R816	06S64995F77	10K ohm
R817	06S64995F77	10K ohm
R818	06T70072F61	2.2K ohm 1/4W
R819	06S64995F85	22K ohm
R820	06T70072F69	4.7K ohm 1/4W
R821	06T70072F77	10K ohm 1/4W
R831	06S64995F77	10K ohm
R832	06S64995F77	10K ohm
R833	06S64995F61	2.2K ohm
R834	06S64996F10	220K ohm

Symbol No.	Part No.	Description
QRB P. C. Board		
Capacitors		
C607	08S65128F69	CP., 0.01μF
C808	08S40805F19	CER., 0.01μF
C809	08S40805F19	CER., 0.01μF
Resistor		
R629	06T70072F77	CP., 10K ohm 1/4W
Load / Photo P. C. Board		
IC / Transistors		
IC311	51T15267W01	IC, LB1641
PT301	48T92913F01	Photo, PT360
PT302	48T92913F01	Photo, PT360
PT303	48T92913F01	Photo, PT360
Diode / LED's		
ZD301	48T15440W12	Zener, UTZJ6.2C
LD301	48T16057W02	LED, AN501-B1 (RED)
LD302	48T16057W02	LED, AN501-B1 (RED)
LD303	48T16057W02	LED, AN501-B1 (RED)
Capacitors		
C311	08S65128F69	CP., 0.01 μF
C312	08S65128F69	CP., 0.01 μF

Symbol No.	Part No.	Description
Resistors (All resistors are chip 1/8W ± 5% unless otherwise noted.)		
R311	06S53330F43	390 ohm
R312	06S53330F47	560 ohm
R313	06S53331F02	100K ohm
R314	06S53331F02	100K ohm
R315	06S53331F02	100K ohm
R316	06T70072F01	4.7 ohm 1/4W
R317	06T70072F01	4.7 ohm 1/4W
R318	06S53330F47	560 ohm
R319	06S53331F02	100K ohm
Miscellaneous		
ET801	01T25803W06	QRB Socket
BA601	60T15855W01	Battery, LIT. CR2450
LCD401	65T25960W01	LCD Display
HD201	88T15309W01	Pick Up Unit
M301	01V13100W97	Assy., Loading Motor (6V-210mA)
M302	59T91005F01	Motor, Spindle (2V-90mA)
M303	59T52973F03	Motor, Sled (6V-210mA)
S301	40T71025F03	Switch, Detector (CAM END)
S302	40T71025F01	Switch, Detector (LIMIT)
PT304	48T92913F01	Transistor, Photo PT360
LD304	48T16057W02	LED, AN501-B1 (RED)
SD301	01A90816F01	Assy., Clamp Solenoid

Exploded View (Cabinet)


ET801
BA601
LCD401
Notes: ○ : Serial Number between No.10718001B and No.10920500B Model Only,
△ : Serial Number after No.11021001M Model Only,
Others : Common.

Cabinet Assembly Parts List

NOTE : The parts without part list are not supplied.

Symbol No.	Index	Part No.	Description
1	3-C	13D21690W04	Assy., Nosepiece
3	1-E	15C21584W04	Cover, Top
4	4-C	07C21606W01	Assy., Bracket Handle
6	3-G	14S94461F03	Insulator, Cover
7	1-B	36B13674W01	Knob, Slide
8	1-B	36B13674W02	Knob, Slide (B)
9	3-B	36A94114F01	Knob, Control (FRONT)
10	3-B	36A94115F01	Knob, Control (BACK)
12		03S52360F78	Screw, Pan (M2.6×8)
13		03S44205G34	Screw, Pan (M2.6×5)
14	2-E	03D40121T43	Screw, W/Double Washer (M2.6×6)
16	3-E	03D40121T06	Screw, W/Double Washer (M2.6×8)
17	2-F	03S44205G29	Screw, Pan (M2.6×6)
18	2-E	15B22125W01	Cover, P.C.Board
21	3-C	15B30048W01	Case, LCD
22	3-G	77C30794W01	FM/MW/LW Tuner Unit MB4R901B (FE001)
23	3-B	26A30047W01	Reflector, Sheet
24	3-C	26A30047W02	Reflector, Sheet
25	3-C	61A21582W01	Lens, LCD
26	4-C	07A30046W01	Bracket, Shield
27		75T35021W02	Rubber, Electric
28	2-C	36C21613W09	Knob, Preset 1/CLEAR
29	2-C	36C21613W10	Knob, Preset 2/P.T.M.
30	2-C	36C21613W11	Knob, Preset 3/O.T.M.
31	2-C	36C21613W12	Knob, Preset 4/M.I.X.
32	3-C	36C21613W13	Knob, Preset 5/REPEAT
33	2-C	36C21613W14	Knob, Preset 6/SCAN
34	2-C	36C21572W01	Knob, Push TUNER
35	3-C	36C21572W03	Knob, Push DISC
36	2-C	36C21569W04	Knob, UP/DN
37	1-C	36B21574W03	Knob, TUNE
38	3-C	36A13658W01	Knob, EJECT
39	1-C	36B21695W03	Knob, A.P.I.
40	1-C	36B21696W02	Knob, DX
41	2-C	36B21697W01	Knob, D.A.P.
42	1-C	36B21696W03	Knob, T.INFO
43	2-C	61A11530W03	Lens, Indicator
44	2-C	61A11530W01	Lens, Indicator
45	2-C	36A21573W01	Knob, Push Base
46	2-C	36A21614W01	Knob, Preset Base
47	2-D	75B21698W01	Cushion, Knob
48	1-C	75B21698W02	Cushion, Knob
49	2-C	15B21694W03	Cover, Volume
50	2-C	13D21691W02	Nose, Reset
51	1-D	03S68555F07	Screw, Pan (M2×4)
	52	3-D	14A38062W01	Insulator, Cover
	55	2-G	04B41345P11	Washer, Lock (M1.2)
	56	3-E	84T35430W01	Flexible, Panel
△	57	4-F	09T84840F02	Lug, Style

Notes : ○ : Serial Number between No.10718001B and No.10920500B Model Only,
△ : Serial Number after No.11021001M Model Only, Others : Common.

Packing Assembly Parts List

Symbol No.	Part No.	Description
101	56S22119W68	Carton, Packing (Individual)
102	56D22122W01	Tray, Packing (L)
103	56D22122W02	Tray, Packing (R)
104	01V31400W91	Assy., Kit
104-1	02B47353F01	Nut, Hex. (M5)
104-2	03S40012G66	Screw, Tapping (M5×20)
104-3	03B44963F03	Bolt, Hex. W/Washer (M5×10)
104-4	03A40155F05	Bolt, Hex. (M5×14)
104-5	03A40155F01	Bolt, Hex. (M5×8)
104-6	03A84814F04	Screw, Special (M2.6×18)
104-7	45A41684U01	Arm, Adapter
104-8	07A30081W01	Bracket, QRB (A)
104-9	07A30082W01	Bracket, QRB (B)
104-10	03S44205G34	Screw, Pan (M2.6×5)

Symbol No.	Part No.	Description
105	68P21910W67	Owner's, Manual
106	56C40990T36	Sack, Polyethylene
107	07B64552F01	Bracket, Strap Receiver
108-1	15D21598W01	Case, Mother
108-2	03A28015W01	Screw, Special (M2.6×6.7)
108-3	01T35620W09	Assy., QRB Connector (With 3A Fuse, For BATT Line)
109	01T96095F08	Assy., Connector (4P)

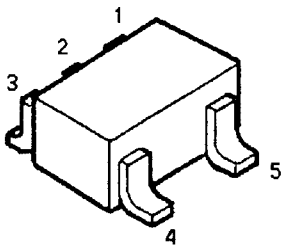
Packing Method View

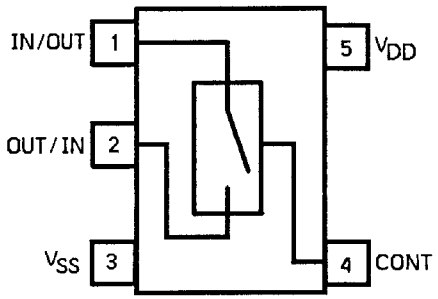
For Packing Method View of this Service Manual, refer to the Service Manual 7906R (68P31588W02).

Semi - Conductor Lead Identifications

Note : The parts is not mentioned, refer to the Service Manual 7906R (68P31588W02).

TC4S66F : IC206





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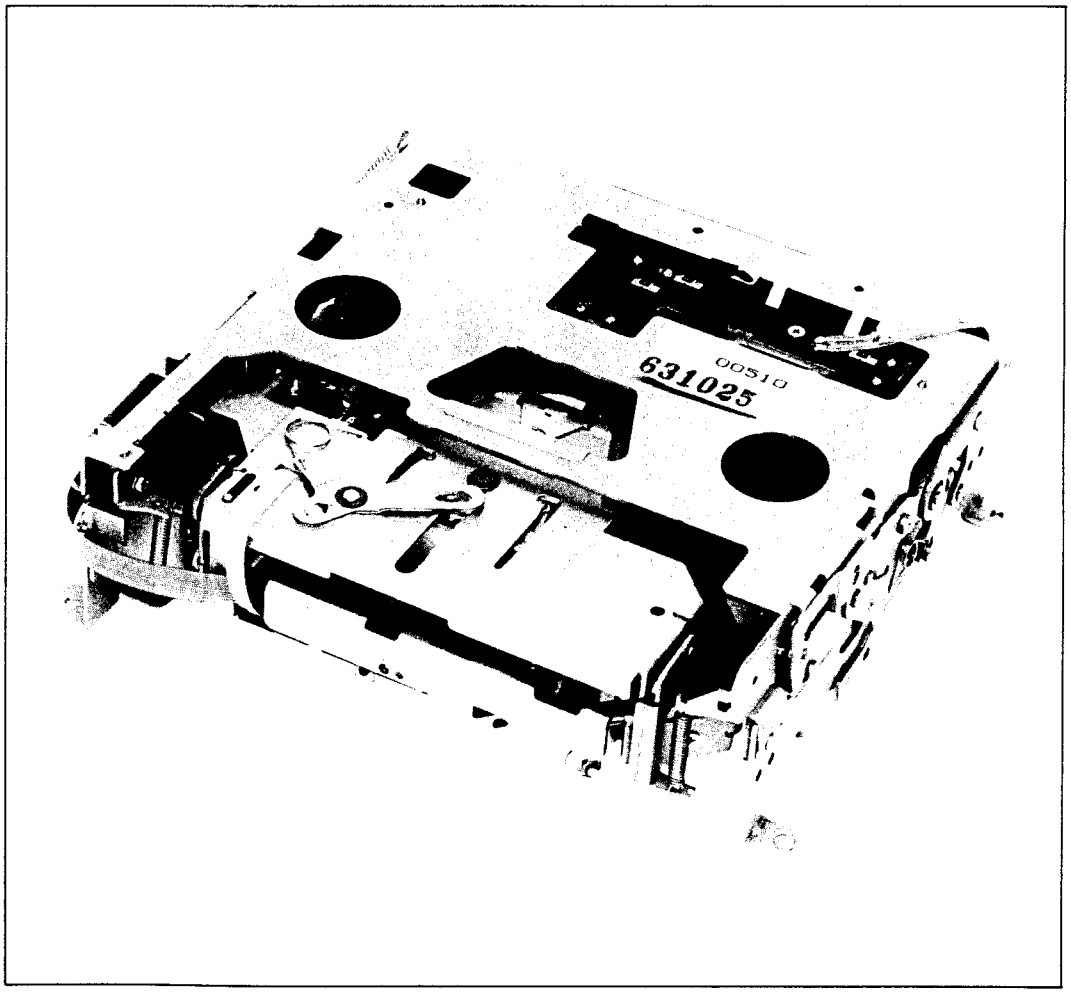
CD Player Mechanism

ADDENDUM & REVISED



DP-S SERIES

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Mechanism function description

Function	Step	Description	Illustration
LOADING (of a 12cm CD)	①	The beam to the photo sensor (A) will be broken when a disc is inserted into the loading position.	Figure 1
	②	The mechanism detects the disc insertion and actuates the Loading motor to rotate. The rotation of motor is transmitted to the drive roller through gears (E), (D), (B) and (A).	Figure 2 Figure 7
	③	The disc will be pinched between the drive roller and the upper guide and pulled into the mechanism.	Figure 7
	④	The disc reaches to the sensor gate mechanism. The beam to the photo sensor (D) is broken, and simultaneously the micro-processor discriminates 12 or 8cm CD size depending on the photo sensor (B). If the beam to the photo sensor (B) is broken, the micro-processor detects that the disc is a 12cm CD and it continues feeding the disc.	Figure 3

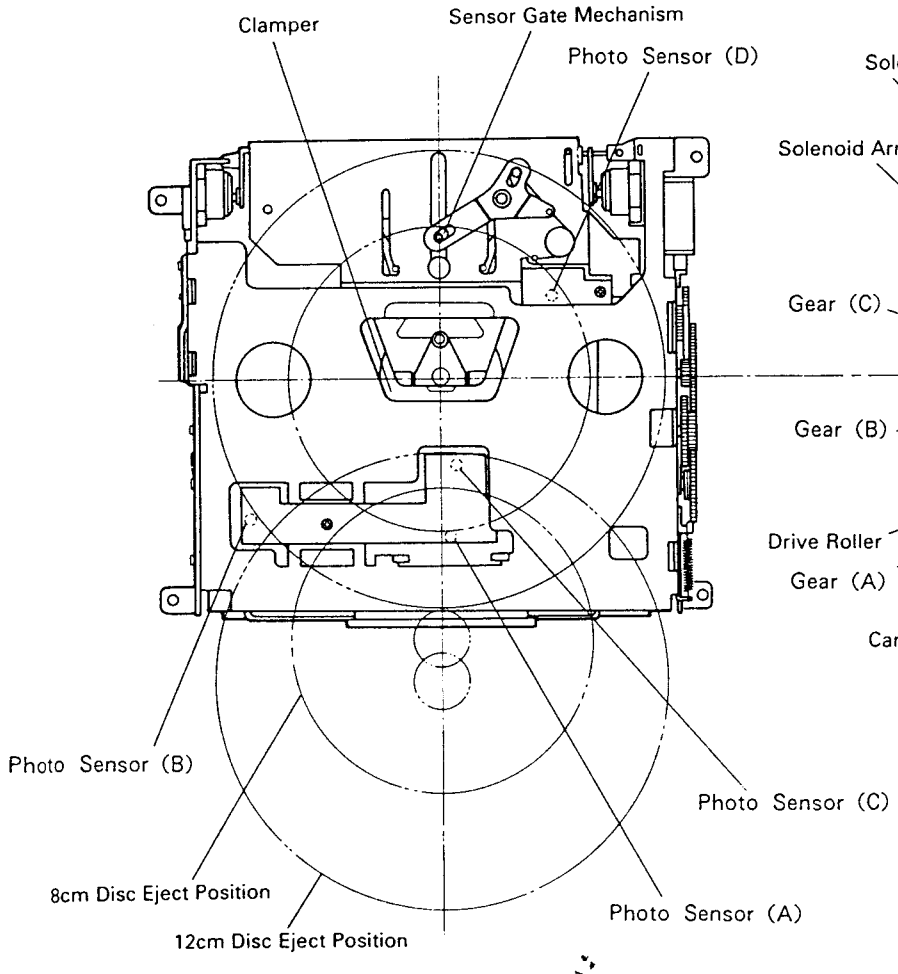


Figure 1

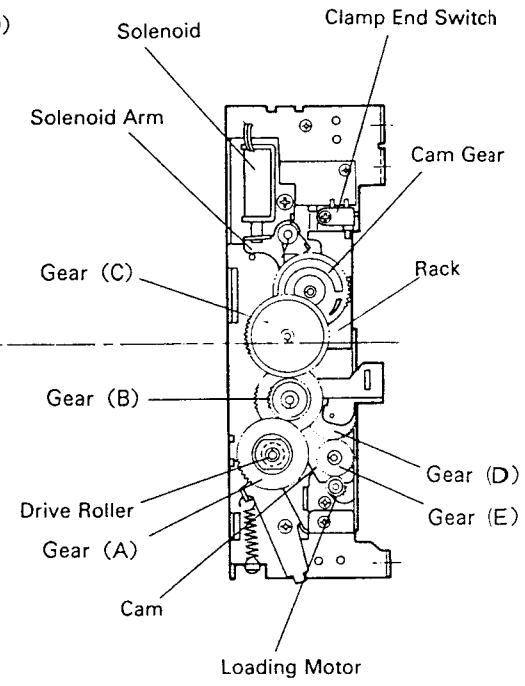


Figure 2

Function	Step	Description	Illustration
LOADING (of a 12cm CD)	⑤	The disc touches the left and right stopper pins, and push them by the feed mechanism. By pushing the stopper pins, the left and right lock levers rotate and the lock pins remove from the lock position of the guide holes.	Figure 3
	⑥	The disc touches the disc stopper and moves the unlocked sensor gate to the outer direction by the feed mechanism.	Figure 4
	⑦	If the disc reaches to the end position, the beam reaches to the photo sensor (B).	Figure 4
	⑧	The mechanism detects that the disc is pulled into the chucking position and starts chucking action.	Figure 4

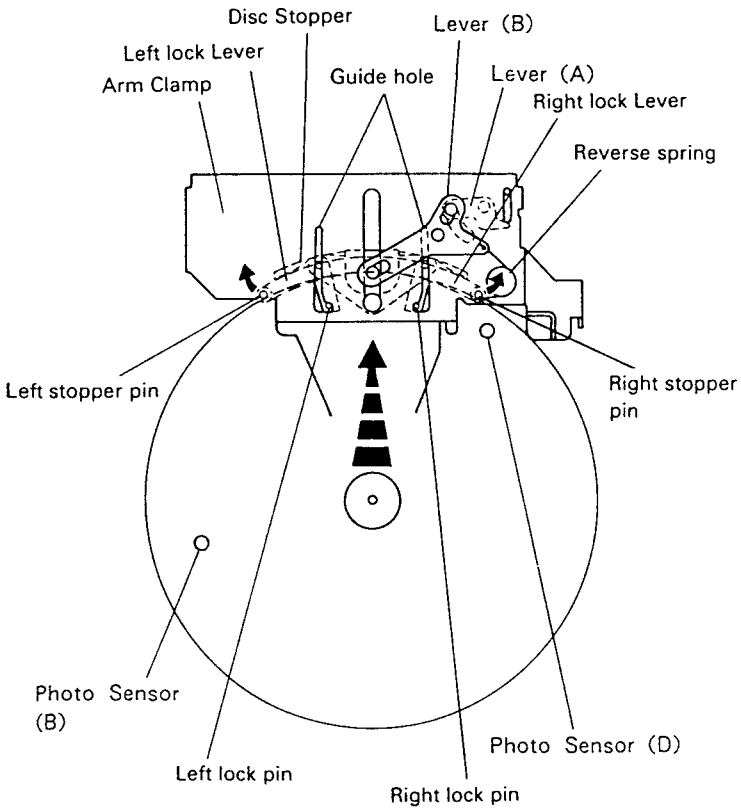


Figure 3

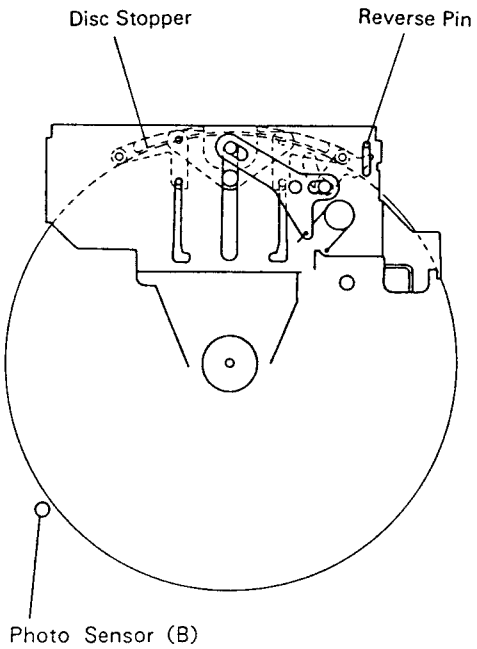
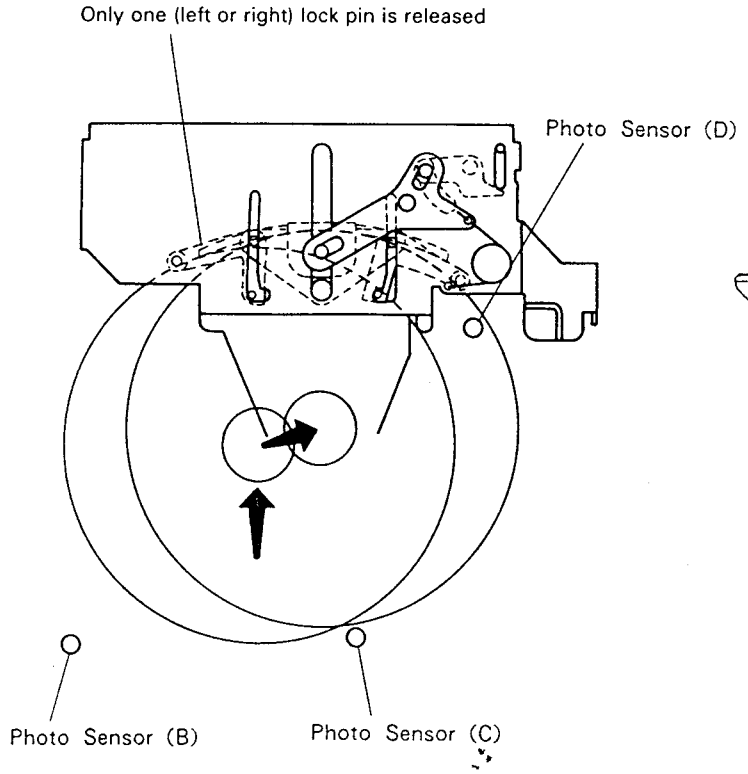


Figure 4

Function	Step	Description	Illustration
LOADING (of a 8cm CD)	① ② ③	The same process as 12cm CD loading operation steps①~③.	Figure 1 Figure 2 Figure 7
	④	The disc reaches to the sensor gate mechanism. The sensor gate mechanism moves depending on the disc insertion position at the disc slot as follows. A) When the disc is inserted at the center of the slot. The disc touches to the disc stopper. The disc cannot push both the left and right stopper pins, so that the locking pins cannot be released. The disc movement stops there. B) When the disc is inserted at the deviated position to the left or right from the center of the slot. First, the disc pushes the left or right stopper pin. The disc cannot push the another stopper pin, so that the locking pins cannot be released. The disc moves by the shape of the disc stopper to the center position and stops.	Figure 5
	⑤	If the beam reaches to the photo sensor (B) and (C) when the beam to the photo sensor (D) is broken by the disc, the mechanism discriminates that the 8cm CD is in the chucking position, and starts chucking action.	Figure 5



When a disc is inserted at the left from the center of the slot.

Figure 5

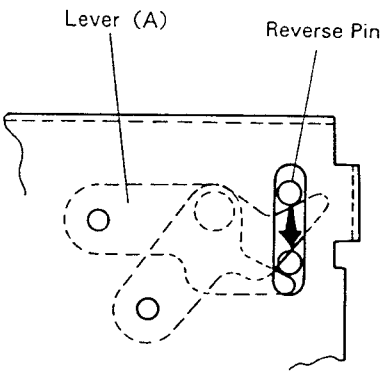


Figure 6

Function	Step	Description	Illustration
CHUCKING	①	The mechanism detects that the disc is pulled into the Chucking position and pulls the solenoid.	Figure 8
	②	The solenoid arm connected with the solenoid starts to rotate and transmits the rotation to the cam gear.	Figure 8
	③	The cam gear starts to rotate and engages with the gear (C) then the driving power of the Loading motor will be transmitted to the cam gear.	Figure 8
	④	The rotating cam gear engages with rack, and moves the rack toward the right.	Figure 8
	⑤	With the movement of the rack, the following functions will be performed simultaneously. A. The clamper moves downward and chucks the disc. B. The drive roller moves downward and releases the disc pinched previously and moves the disc downward. C. Releases the locking on the pickup block and places the unit in the floating status.	Figure 8 Figure 9 Figure 10
	⑥	The rack slides to the right end and releases the engagements between the gear (C) and the cam gear as well as the cam gear and rack, and turns the clamp end switch on.	Figure 8
	⑦	The mechanism detects that the clamp operation has finished, and the Loading motor stops rotating.	Figure 8

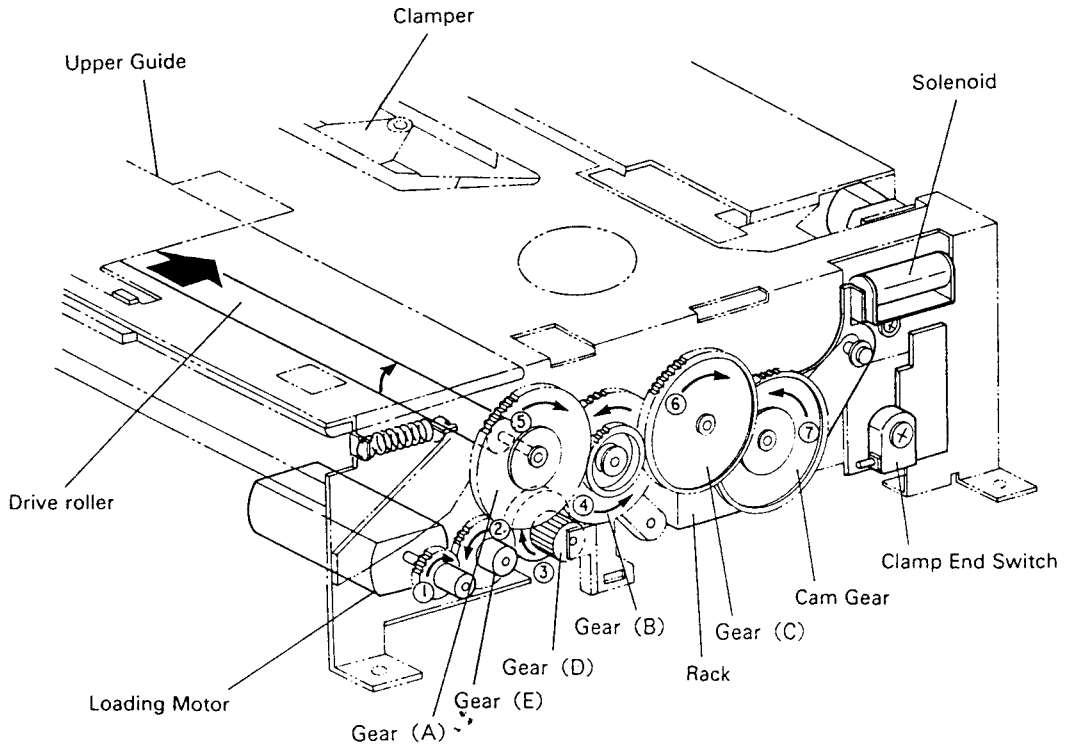


Figure 7

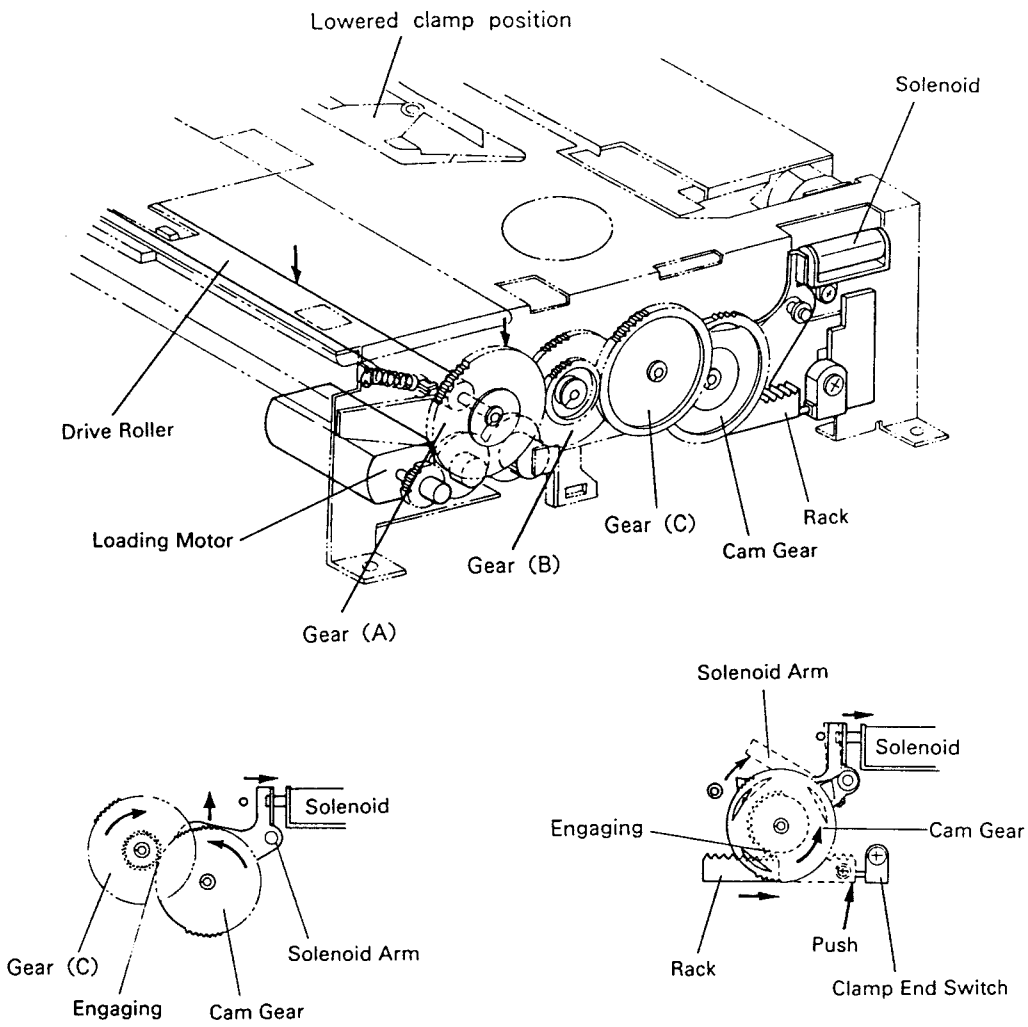


Figure 8

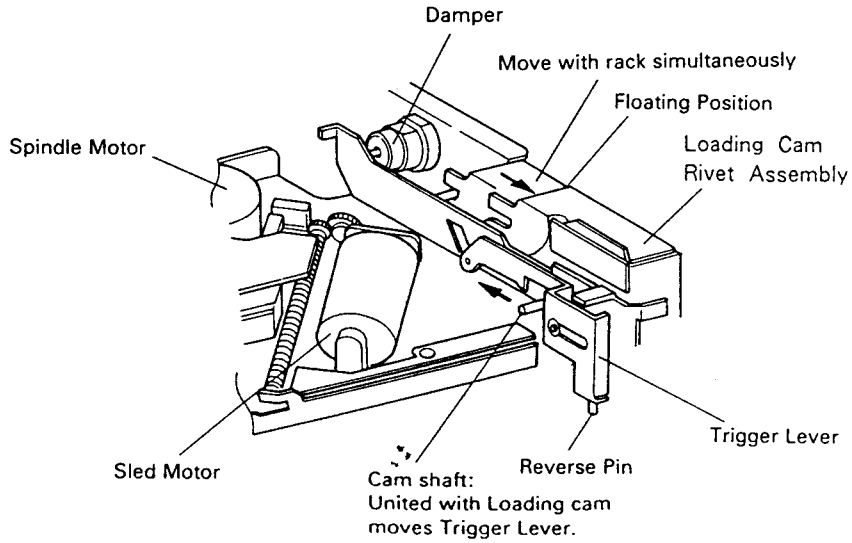


Figure 9

Function	Step	Description	Illustration
PLAY	①	The spindle motor rotates the disc.	Figure 10
	②	The rotation of the sled motor is transmitted to the shaft screw through the gear, moves the pickup.	Figure 10
	③	The Inner limit switch detects the lead-in position of the disc, and the mechanism begins to read the information of the disc.	Figure 10

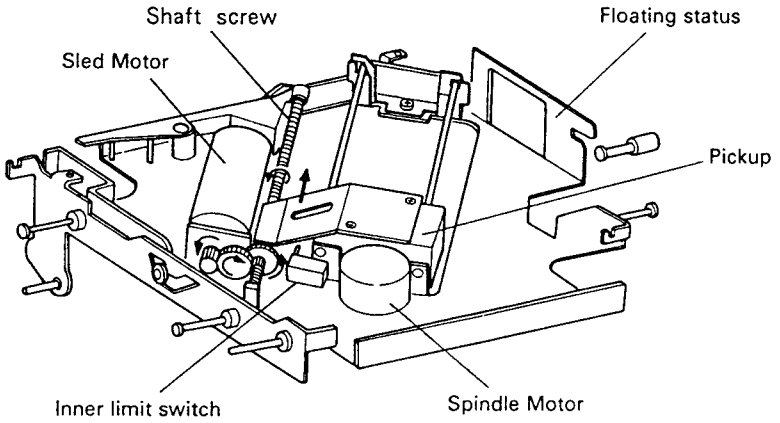


Figure 10

Function	Step	Description
EJECTION (of a 12cm CD)	①	The Loading motor rotates in the reverse direction when loading.
	②	Pulls the solenoid.
	③	The solenoid arm engaged with the solenoid starts rotating and the cam gear engages with the gear (C).
	④	The cam gear rotates and engages with the rack and then moves the rack in the left direction.
	⑤	Engaging with the movement of the rack, the following functions will be performed simultaneously. A. The clamper moves upward and releases the disc. B. The driving roller moves up and lifts the disc, and pinches the disc between it and the upper guide. C. Locks the pickup block. D. The reverse pin moves with engaging the levers (A) and (B), which moves the sensor gate mechanism to the original position.
	⑥	When the rack moves to the left, the engagements between the gear (C) and the cam gear, the cam gear and the rack will be released.

Function	Step	Description
EJECTION (of a 12cm CD)	⑦	The disc which is pinched between the drive roller and the upper guide moves to the outside of the mechanism. When the disc is sent out to the EJECT position, the beam broken by the disc is released and reaches the photo sensor (B).
	⑧	The mechanism detects that the disc has come out to the EJECT position and stops the motor rotation.
	⑨	The mechanism detects that all functions have finished when the disc is pulled out from the mechanism and beam is passed through to the photo sensor (A).
RELOAD (of a 12cm CD)	①	If the disc is not pulled out from the mechanism for 15 seconds after it comes to the EJECT position, the mechanism actuates the Loading function steps ① – ⑧.
EJECTION (of a 8cm CD)	① ② ③ ④	The same process as 12cm CD Eject operation steps ①~④.
	⑤	Engaging with the movement of the rack, the following functions will be performed simultaneously. A. B. C. ┐ The same process as 12cm CD Eject operation step ⑤ – A, B, C.
	⑥	The same process as 12cm CD Eject operation step ⑥.
	⑦	The disc which is pinched between the drive roller and the upper guide moves to the outside of the mechanism. The disc is released from the drive roller and stops.
	⑧	If the beam reaches the photo sensor (C) after 1.5 seconds from starting ejection, the motor stops.
	⑨	The mechanism detects that all functions have finished, when the disc is pulled out from the mechanism and beam is passed through to the photo sensor (A).

Function	Step	Description
TROUBLE SHOOTING (While Loading a 12cm CD)	①	If the beam to the photo sensor (D) is not broken within 3 seconds after the Loading motor begins rotating as described in the Loading operation step ②, the mechanism takes it as trouble and rotates the Loading motor inversely and pushes the disc out to the EJECT position.
	②	In the Loading step ④, if the beam does not reach the photo sensor (D) within 3 seconds after the beam to the photo sensor (B) is broken, the mechanism take it as trouble and rotates the loading motor inversely and push the disc out to the eject position. If the disc is removed and the beam reaches the photo sensor (A), the mechanism performs loading, chucking and ejection without a disc. (To place the sensor gate mechanism from the END position to the original position the mechanism operates the Ejection step ⑤ – d)
	③	When the disc is pulled out during the loading process, the Loading motor rotates inversely and stops the rotating after certain seconds.
(While loading a 8cm CD)	①	The same process as 12cm CD loading operation step①.
	②	The same process as 12cm CD loading operation step③.
(While Chucking)	①	In the chucking operation (step ①) if the Clamp End Switch doesn't turn on within 3 seconds after the solenoid is pulled, the mechanism takes it as trouble and rotates the Loading motor inversely and pushes the disc out and stops at the EJECT position.
(While Playing)	①	After disc chucking, if the mechanism is unable to read the information of the disc for some reason, it actuates the EJECTION operation steps.
(While Ejecting a 12cm CD)	①	If the disc doesn't come to the EJECT position within 5 seconds after the solenoid is pulled in the EJECTION operation step ①, the mechanism takes it as trouble and rotates the Loading motor inversely and performs the Loading operation steps.
(While Ejecting a 8cm CD)	①	If the beam does not reach the photo sensor (C) within 1.5 seconds after starting ejection, the motor continues rotating. If the beam does not reach the photo sensor (C) within 5 seconds after starting ejection, the mechanism takes it as trouble and changes the motor rotating direction and performs loading steps.

Disassembly Instructions

● For DP24A01O ／ DP24A02O models

1. Removal of the Load／Photo P. C. Boards
(1) Remove three screws marked with "○" as shown in Figures 11 and 12.
(2) Remove the solder (c) as shown in Figure 11.

2. Removal of the LED P. C. Board
(1) Remove the solder (b) as shown in Figure 12.
(2) Remove the screw marked with "▲" as shown in Figure 12.

3. Removal of the End Switch (A) P. C. Board
(1) Remove the two screws marked with "●" as shown in Figure 13.
(2) Remove the two lead wires from the solenoid.

4. Removal of the Pick-Up Unit
(1) Remove the cam gear and the gear (C) as shown in Figure 13.
(2) Remove the four screws marked with "※" as shown Figures 13 and 14.
(3) Both the Pick-Up Unit and Rivet Loading Bracket Assembly will be removed.

Note :The cam gear and gear (C) are mounted with washers. Do not lose the washers, keep them carefully.

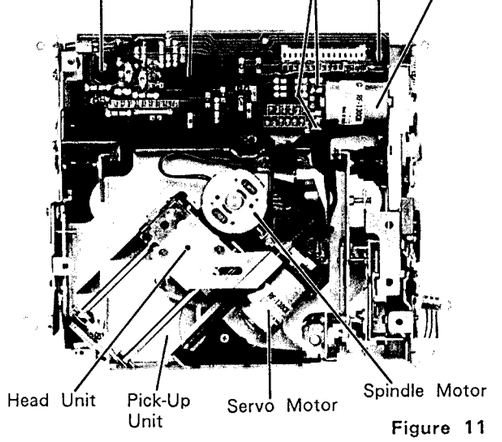


Figure 11

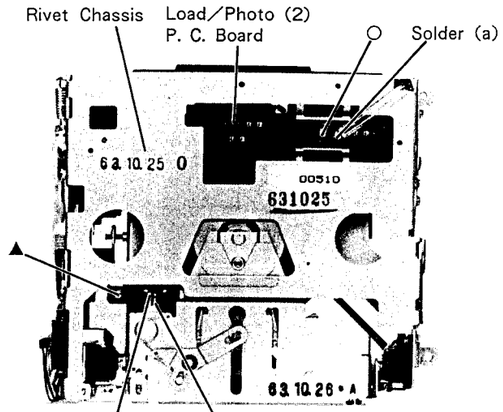


Figure 12

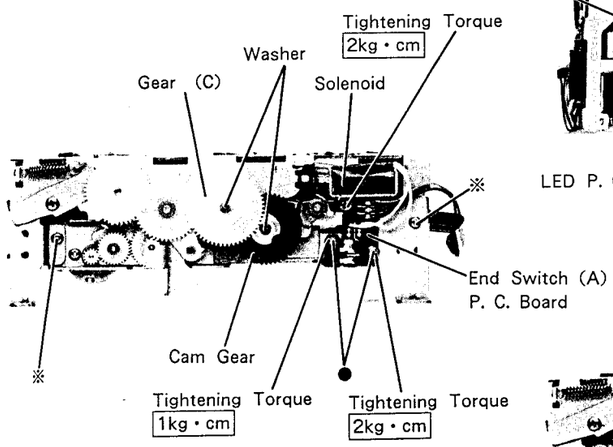


Figure 13

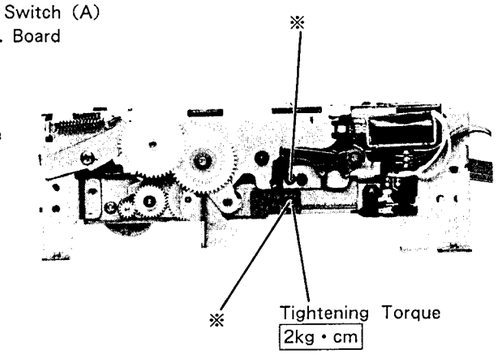


Figure 14

5. Removal of the Rivet Loading Bracket Assembly
(1) After removing the Pick-Up Unit, pull the Rivet Loading Bracket Assembly toward you while twisting it in the direction shown by the arrow, as shown in Figure 15.

6. Removal of the Servo Motor
(1) After removing the Rivet Loading Bracket Assembly, remove the two screws marked with "□" as shown in Figure 17.

Note :Both the Servo Motor and Flexible wire will be removed. Do not damage the flexible wire.

7. Removal of the Head Unit
(1) After removing the servo Motor, remove the two screws marked with "◆" as shown in Figure 17.

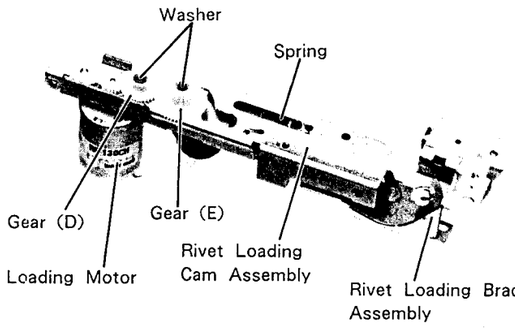


Figure 16

8. Removal of the Rivet Loading Cam Assembly
(1) After removing the Rivet Loading Bracket Assembly, remove the gear (D) and gear (E) as shown in Figure 16.
(2) Remove the Washer and "E" ring as shown in Figures 16 and 19.

Note : 1) Do not lose the washer and "E" ring and keep them carefully.
2) Remove the spring and them at the same time as shown in Figure 16.

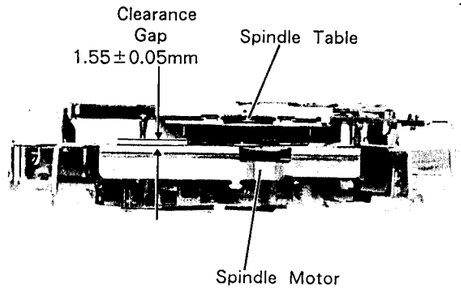


Figure 18

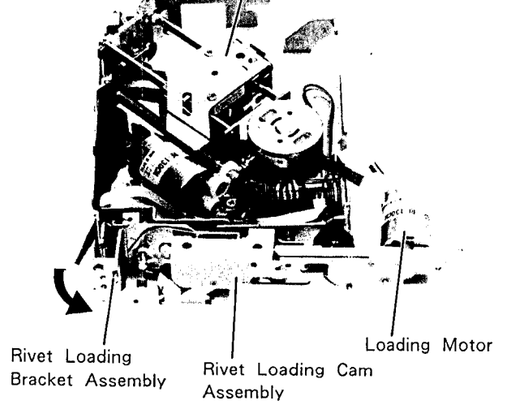


Figure 15

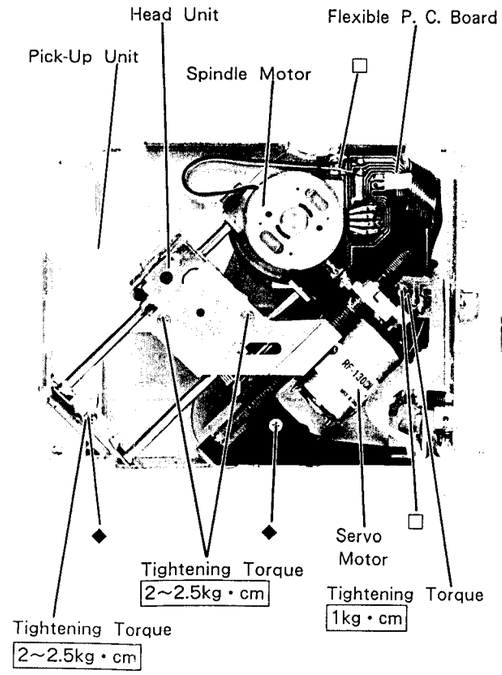


Figure 17

5. Removal of the Rivet Loading Bracket Assembly

(1) After removing the Pick-Up Unit, pull the Rivet Loading Bracket Assembly toward you while twisting it in the direction shown by the arrow, as shown in Figure 15.

6. Removal of the Servo Motor

(1) After removing the Rivet Loading Bracket Assembly, remove the two screws marked with "□" as shown in Figure 17.

Note :Both the Servo Motor and Flexible wire will be removed. Do not damage the flexible wire.

7. Removal of the Head Unit

(1) After removing the servo Motor, remove the two screws marked with "◆" as shown in Figure 17.

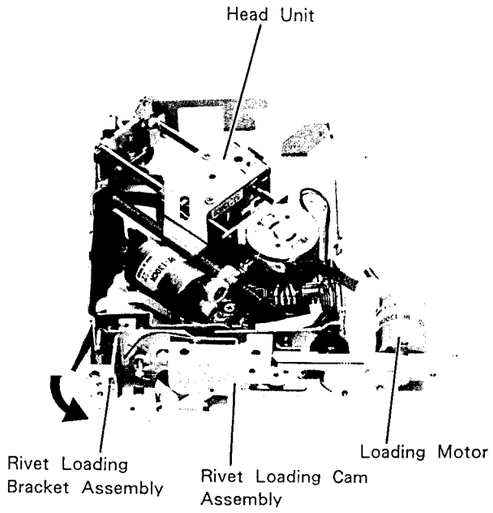


Figure 15

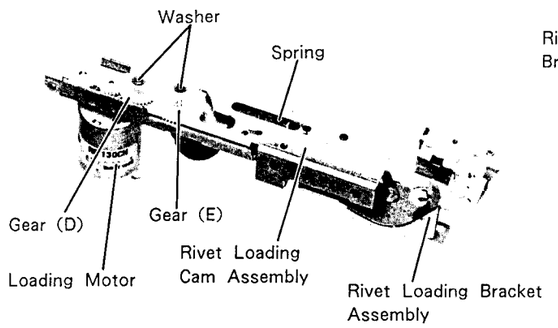


Figure 16

8. Removal of the Rivet Loading Cam Assembly

(1) After removing the Rivet Loading Bracket Assembly, remove the gear (D) and gear (E) as shown in Figure 16.

(2) Remove the Washer and "E" ring as shown in Figures 16 and 19.

Note : 1) Do not lose the washer and "E" ring and keep them carefully.

2) Remove the spring and them at the same time as shown in Figure 16.

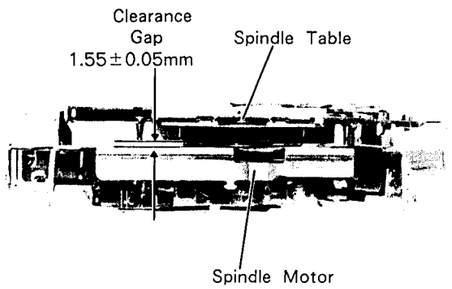


Figure 18

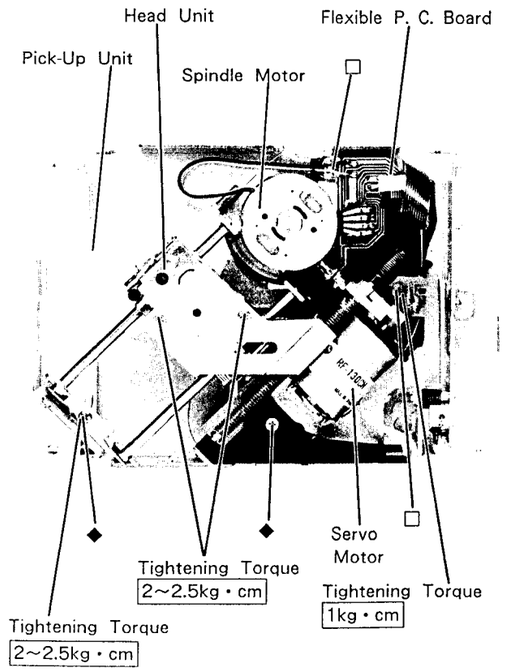


Figure 17

9. Removal of the Loading Motor.

(1) After removing the Rivet Loading Cam Assembly, remove the two screws marked with "△" as shown in Figure 19.

※Useful hints for remounting the cam gear and gear (C).

(1) Set the Rivet Loading cam Assembly to the loading position as shown in Figure 20.

(2) Engage the gear cam with the gear (C) as shown in the Figure 21, and mount them on the shafts (A) of the Arm Load (R) Assembly as shown in Figure 20.

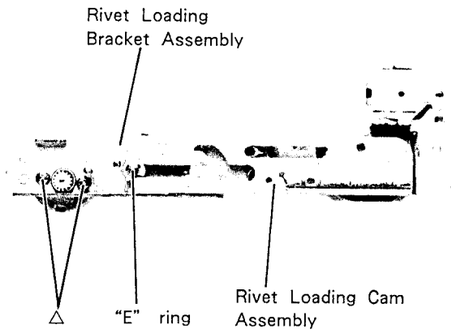


Figure 19

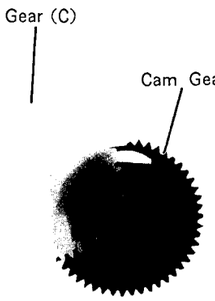


Figure 21

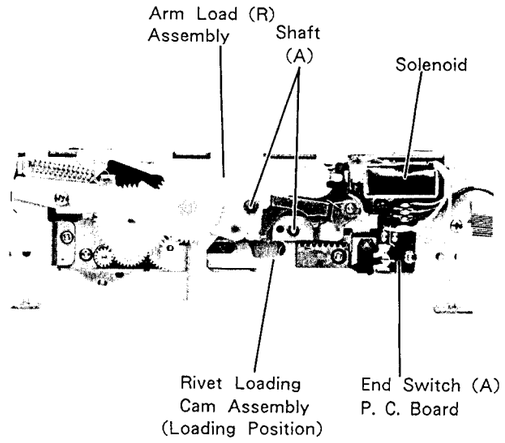


Figure 20

※Caution on remounting the Servo Motor.

(1) After mounting the screw motor, make sure the clearance between the servo motor and flexible wire is more than 0.5mm as shown in Figure 22.

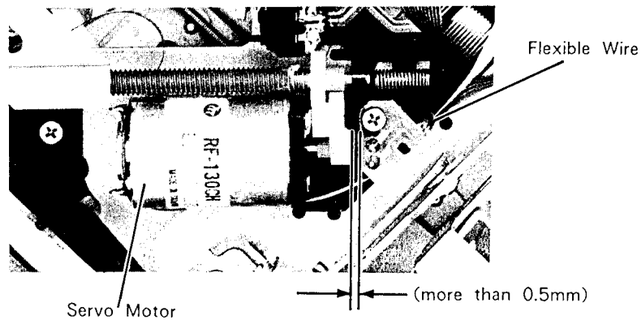


Figure 22

CD Mechanism Assembly Parts List

●For DP24A010/DP24A020 Models

Symbol No.	Index	Part No.	Description
● 202	4-H	15C13518W01	Guide, Top (DP-2)
▲ 202	4-H	15C13518W02	Guide, Top (DP-2)
203	4-G	03S44205G14	Screw, Pan (M2 × 5)
204	3-H	30T73687F18	Parallel Wire (2P)
205		41B12249W02	Spring, Pull
206		04A41345P06	Washer, Lock (M2.1)
207	1-E	41A90876F01	Spring, ROL (L)
208	5-F	45A90817F01	Arm, Solenoid (1)
209	5-F	45A90818F01	Arm, Solenoid (2)
210	5-F	41A92364F01	Spring, Solenoid
211	2-F	07B10907W01	Stopper, Disc
212	4-F	47A61544F01	Plunger, F/R
▲ 213	3-G	75A20934W01	Cushion, Magnet (B)
215		03D40014G66	Screw, W/Washer (M2 × 3.5)
216		03D40014G07	Screw, W/Washer (M2 × 4)
217	4-F	44B90838F01	Gear, Cam
218	4-B	46A91007F01	Stud, Gear
219	4-E	41B12249W07	Spring, Pull
221	2-F	49B90822F01	Roller (G)
223		43A90873F01	Bush, Roller
225	4-C	41A90877F01	Spring, Cam
226		03D40014G62	Screw, W/Washer (M2 × 3)
227	5-C	44A90836F01	Gear (D)
228	5-C	44A90837F01	Gear (E)
229		04A41345P01	Washer, Lock (M1.2)
230		75B11922W01	Damper, DP-3
231		15A12929W01	Holder, Damper-3
232		04C42091G06	Ring "E" (M1.5)
233	5-C	04C42091G11	Ring "E" (M2.5)
234	4-E	03S94385F21	Screw, Pan (M1.7 × 3)
236	4-C	41A11905W01	Spring, Trigger
237		04C42091G05	Ring "E" (M2)
239		03S94385F18	Screw, Pan (M2 × 3.5)
240		03S94385F09	Screw, Pan (M2 × 3)
241	3-A	03S94385F20	Screw, Pan (M2 × 8.5)
242	3-A	03S72235F35	Screw, Pan (M2 × 3.5)
243	3-E	43A20319W01	Table, Spindle
244	3-B	07B10923W01	Bracket, Screw
245	2-C	47A20146W01	Shaft, Pick-up
246	3-C	43A11901W01	Bush, Trigger (A)
247	5-C	04A41345P15	Washer, Lock (M1.2)
249	3-B	47A10927W01	Shaft, Screw
250	3-B	44A90998F01	Gear, Screw
252	4-B	44A90996F01	Gear, Motor
253	4-G	41B90875F06	Spring, Pull
254	4-C	44A90997F01	Gear, Middle
255		04A41345P02	Washer, Lock (M1.7)
256	4-F	03S94385F23	Screw, Pan (M2 × 5)
257		03D40014G62	Screw, W/Washer (M2 × 3)
258	3-B	07C10922W01	Bracket, Motor
259	3-B	41A10928W03	Spring, Shaft
261	4-D	43A11902W01	Bush, Trigger (B)
262	5-G	04S40075G12	Washer, Polyslider (M3.1)
263	3-B	41C10925W01	Spring, Nut
264	3-E	14A96087F01	Sheet, Table
265	4-A	84T15149W01	FPC Actuate P.C.Board
266	4-E	01A21238W01	Assy., Clamper Rivet
269	3-F	41B12249W01	Spring
270	3-F	04A41345P22	Washer, Lock (M2.6)
271	3-E	07A11522W01	Bracket, Disc Stopper
272	4-E	41A11903W01	Spring, Lever
273	4-F	07A11468W01	Plate, Top
274	5-C	44A90830F01	Rack, Cam
275	4-F	03S68259F11	Screw, Pan (M1.7 × 2)
277	2-B	47A21175W01	Shaft, Pick-up
279	1-C	41B12249W03	Spring, Pull
280	2-E	41B12249W04	Spring, Pull
281	4-D	41B12249W05	Spring, Pull
282	4-B	43A20208W01	Spacer, LED
283	4-E	30T73687F19	Parallel Wire (2P)

NOTE : The parts without part numbers are not supplied.

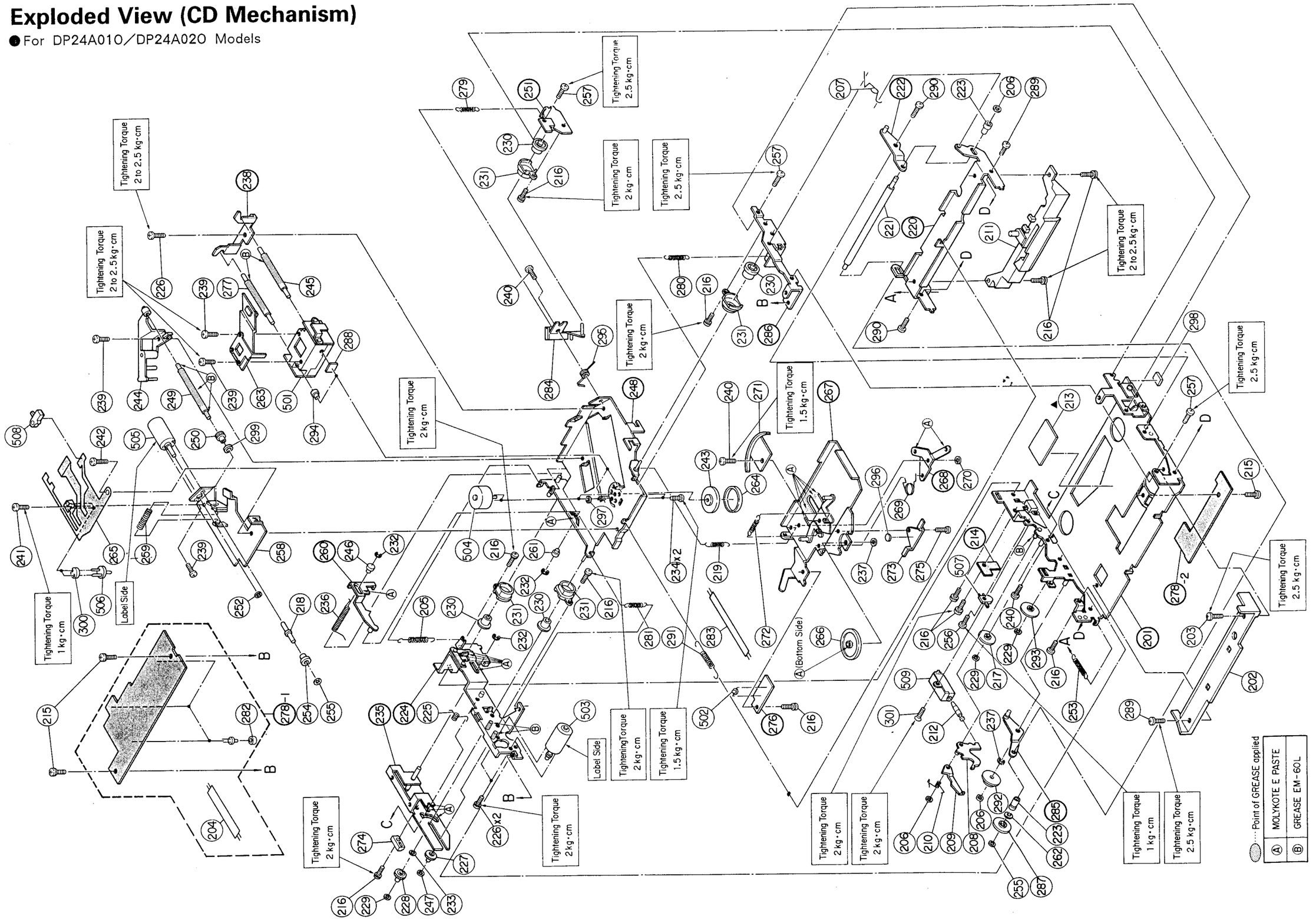
● : For DP24A010 model only, ▲ : For DP24A020 model only, others : Common

Symbol No.	Index	Part No.	Description		
284	3-D	01A92321F01	Assy., Bracket Rivet (CLP−LP)		
287	5-G	01T15181W01	Assy., Clutch DP		
288		75A21138W01	Sheet, Shaft		
289		03A90175F01	Screw, Bind (M2 × 4)		
290		03A90175F02	Screw, Bind (M2 × 3)		
291	4-E	41B90875F07	Spring, Pull		
292	5-F	44A90834F01	Gear (B)		
293	4-G	44A90835F01	Gear (C)		
294	3-C	43A13508W01	Spacer, Shaft		
295	2-D	41A96086F01	Spring, Arm Clamp		
296	3-F	43A41006F01	Spacer, Polyslider		
297		43A20137W01	Spacer		
298	2-G	75A20928W01	Rubber, Top Chassis		
299	3-B	04S40075G07	Washer, Polyslider (M2.1)		
300	4-A	43A20208W02	Spacer, LED (A)		
301		03S94385F14	Screw, Pan (M2.6×3)		
Miscellaneous					
501	3-B	88T15309W01	Pick-up, Unit		
502	4-E	48T16057W02	LED, AN501		
503	4-D	01V13100W97	Assy., Motor Load		
504	3-C	59T91005F01	Motor, Spindle		
505	3-B	59T52973F03	Motor, Servo		
506	4-A	48T92913F01	Transistor, Photo PT360		
507	4-F	40T71025F03	Switch, Detector		
508	3-A	40T71025F01	Switch, Detector		
509	4-F	01A90816F01	Assy., Solenoid DP Frame		

Symbol No.	Index	Part No.	Description		

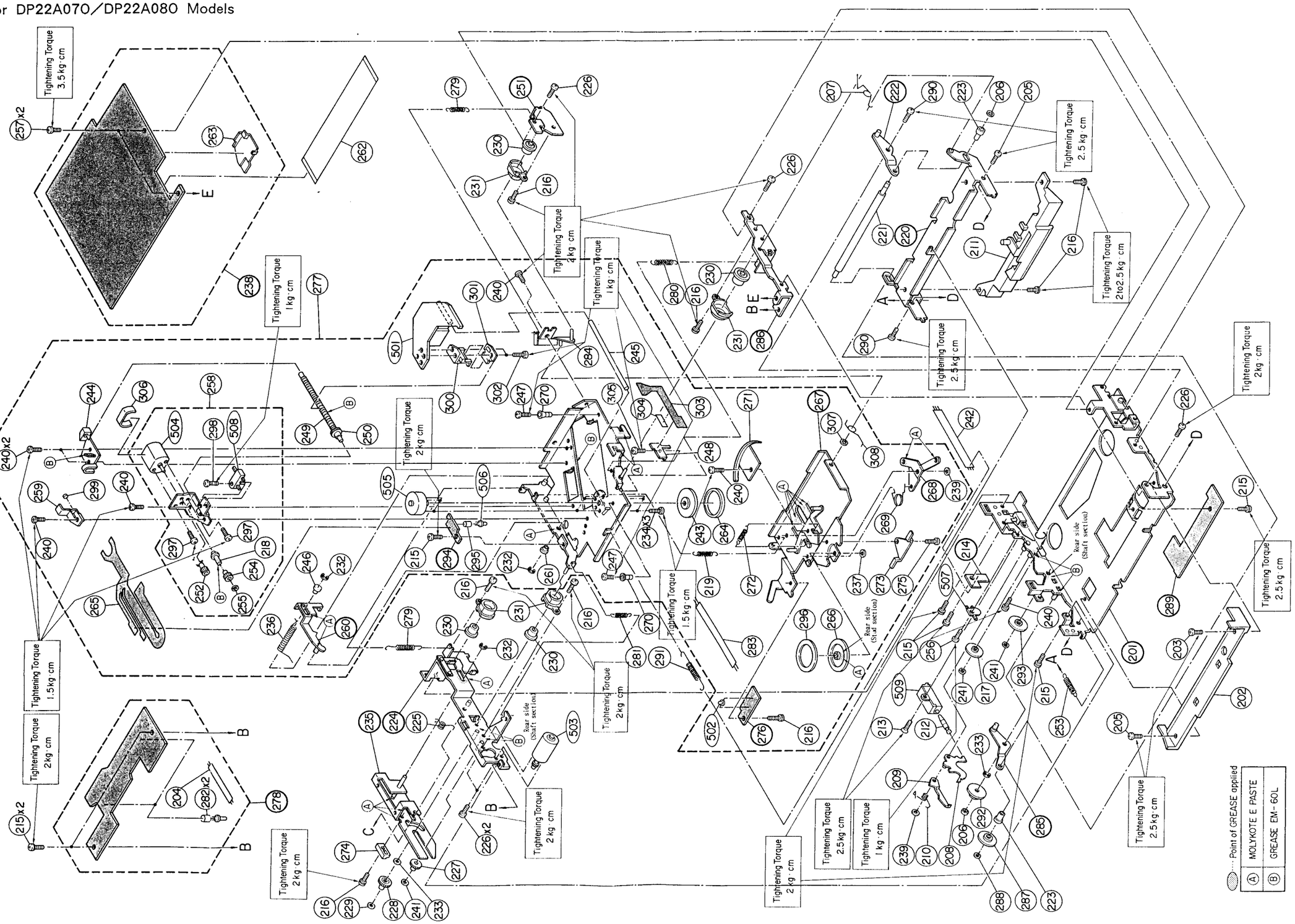
Exploded View (CD Mechanism)

● For DP24A010/DP24A020 Models



Exploded View (CD Mechanism)

● For DP22A070/DP22A080 Models


Tightening Torque 3.5 kg·cm
Tightening Torque 1 kg·cm
Tightening Torque 4 kg·cm
Tightening Torque 2.5 kg·cm
Tightening Torque 2 to 2.5 kg·cm
Tightening Torque 2 kg·cm
Tightening Torque 1.5 kg·cm
Tightening Torque 2.5 kg·cm
Tightening Torque 2 kg·cm
Tightening Torque 2 kg·cm
Tightening Torque 2.5 kg·cm
Tightening Torque 1 kg·cm
Tightening Torque 2 kg·cm
Tightening Torque 2.5 kg·cm
Tightening Torque 1.5 kg·cm
Tightening Torque 2 kg·cm
Rear side (Shaft section)
Rear side (Shaft section)
Rear side (Shaft section)
Point of GREASE applied
Ⓐ MOLYKOTE E PASTE
Ⓑ GREASE EM-60L

CD Mechanism Assembly Parts List

●For DP22A070/DP22A080 Models

Symbol No.	Index	Part No.	Description		
202	4-H	15C13518W01	Guide, Top (DP-2)		
203	4-G	03S44205G14	Screw, Pan (M2×5)		
204		30T73687F18	Parallel, Wire (2P)		
205		03A90175F01	Screw, Bind (M2×4)		
206	5-F	04A41345P06	Washer, Lock (M2.1)		
207	1-E	41A90876F01	Spring, ROL		
208	5-F	45A90817F01	Arm, Solenoid. (1)		
209	5-F	45A90818F01	Arm, Solenoid. (2)		
210	5-F	41A92364F01	Spring, Solenoid.		
211	2-F	07B10907W01	Stopper, Disc		
212	4-F	47A61544F01	Plunger, F/R		
213	4-F	03S94385F14	Screw, Countrersink (M2.6×3)		
215		03D40014G66	Screw, W/Washer (M2×3.5)		
216		03D40014G07	Screw, W/Washer (M2×4)		
217	4-F	44B90838F01	Gear, Cam		
218	4-B	46A91007F01	Stud, Gear		
219	4-E	41B12249W07	Spring, Pull		
221	2-F	49B90822F01	Roller (G)		
223	5-G	43A90873F01	Bush, Roller		
225	4-C	41A90877F01	Spring, Cam		
226		03D40014G62	Screw, W/Washer (M2×3)		
227	5-C	44A90836F01	Gear (D)		
228	5-C	44A90837F01	Gear (E)		
229	5-C	04A41345P01	Washer Lock (M1.2)		
230	2-D	75B11922W01	Damper, DP-3		
231		15A12929W01	Holder, Damper DP-3		
232		04C42091G06	Ring "E" (M1.5)		
233		04C42091G11	Ring "E" (M2.5)		
234	3-D	03S94385F01	Screw, Pan (M1.7×2.3)		
236	4-B	41A11905W01	Spring, Trigger		

Symbol No.	Index	Part No.	Description		
237	4-F	04C42091G05	Ring "E" (M2)		
239	5-F	04A41345P24	Washer, Lock (M2.1)		
240		03S94385F09	Screw, Pan (M2×3)		
241		04A41345P15	Washer, Lock (M1.2)		
242	3-F	30T73687F14	Parallel, Wire (3P)		
243	3-E	43A20319W01	Table, Spindle		
244	3-A	07A90992F01	Bracket, Screw		
245	3-D	47A91004F01	Shaft, Pick-up		
246	4-C	43A11901W01	Bush, Trigger (A)		
247		03S94385F10	Screw, Pan (M2×4)		
248	3-E	07A92196F01	Bracket, Flex Wire		
249	3-C	03A91001F01	Shaft, Screw		
250	3-C	44A90998F01	Gear, Screw		
252	4-B	44A90996F01	Gear, Motor		
253	4-G	41B90875F06	Spring, Pull		
254	4-B	44A90997F01	Gear, Middle		
255	4-B	04A41345P13	Washer, Lock (M1.7)		
256	4-F	03S94385F23	Screw, Pan (M2×5)		
257	1-A	03S44205G42	Screw, Pan (M2.6×4)		
258	3-B	01V91700F07	Assy., Motor Unit		
259	3-A	41A90999F01	Spring, Screw		
261	4-D	43A11902W01	Bush, Trigger (B)		
262	2-C	30T92773F01	Cable, Flex (16P)		
263	2-B	26A94948F01	Shield		
264	3-E	14A96087F01	Sheet, Table		
265	4-B	84T15747W01	FPC Actuator P. C. Board		
266	4-E	01A21238W01	Assy., Clamper Rivet		
269	3-F	41A11904W01	Spring, Slider		
270		43A90995F01	Stopper, Shaft		
271	3-E	07A11522W01	Bracket, Disc Stopper		
272	4-E	41A11903W01	Spring, Lever		
273	4-F	07A11468W01	Plate, Top		
274	5-C	44A90830F01	Rack, Cam		
275	4-F	03S68259F11	Screw, Pan (M1.7×2)		
277	2-C	01V14400W80	Assy., Pick-up Unit-S2		

NOTE : The parts without part numbers are not supplied.

Symbol No.	Index	Part No.	Description		
279		41B21241W01	Spring, Pull		
280		41B21241W03	Spring, Pull		
281		41B21241W04	Spring, Pull		
282	5-B	43A20208W01	Spacer, LED		
283	4-E	30T73687F20	Parallel, Wire (2P)		
284	3-D	01A92321F01	Assy., Bracket, Rivet (CLP-LP)		
287	5-F	01T15181W01	Assy., DP Clutch		
288	5-F	04A41345P13	Washer, Lock (M1.7)		
290		03A90175F02	Screw, Bind (M2×3)		
291		41B90875F07	Spring, Pull		
292	5-F	44A90834F01	Gear (B)		
293		44A90835F01	Gear (C)		
295	4-D	43A20208W03	Spacer, LED (A)		
296	4-E	75A20128W01	Sheet, Holder		
297		03S94385F10	Screw, Pan (M2×4)		
298	3-B	03S94385F12	Screw, Pan (M2.6×6)		
299	3-A	43A41006F05	Spacer, Polyslider		
300	3-C	07A90993F01	Bracket, Pick-up		
301	2-D	01A90994F01	Spring, Nut		
302	3-D	03S94385F03	Screw, Pan (M1.7×1.8)		
303	3-E	84T90887F01	FPC PHOTO P. C. Board		
304	3-D	14S71058F40	Insulator, Cover		
305	3-D	03S94385F06	Screw, Pan (M2×1.8)		
306	3-B	41A94452F01	Spring, Motor		
307	3-E	04S40075G06	Washer Polyslider (M2.1)		
308	3-F	41A96086F01	Spring, Arm Clamp		

Miscellaneous

501	3-C	88T90878F01	Pick-up, Unit		
502	4-E	48T16057W02	LED, AN501-B1 (RED)		
503	4-D	01V21900W45	Assy., Motor Load		
504	3-B	59T90879F01	Motor, Servo		
505	3-C	59T91005F01	Motor, Spindle		
506	3-D	48T92913F01	Transistor, Photo PT360		
507	4-F	40T71025F03	Switch, Detector		
508	3-B	40T71025F01	Switch, Detector		
509	4-F	01A90816F01	Assy., Solenoid DP Frame		

Symbol No.	Index	Part No.	Description		

Disassembly Instructions

● For DP22A07O / DP22A08O models

1. Removal of Main P. C. Board

(1) Unsolder the solder (a) as shown in Figure 23.
(2) Remove two screws marked "○" as shown in Figure 23.
(3) Disconnect all connectors from the Main P. C. Board while lifting up the Main P. C. Board A section.

Note : When unsoldering the solders (a), take care not to break the parallel wire.

2. Removal of Interface P. C. Board

(1) After removing the Main P. C. Board, unsolder the solder (b) as shown in Figure 24.
(2) Remove two screws marked "×" as shown in Figure 24.
(3) Remove two jumper wires connected to the loading motor.

Note : When unsoldering the solders (b), take care not to break the parallel wire.

3. Removal of Sensor P. C. Board

(1) Unsolder the solder (c) as shown in Figure 25.
(2) Remove one screw marked "△" as shown in Figure 25.

Note : When unsoldering the solders (c), take care not to break the parallel wire.

4. Removal of End Switch P. C. Board

(1) Unsolder the solders (d) and (e) as shown in Figure 26.
(2) Remove two screws marked "□" as shown in Figure 26.

Note : When unsoldering the solders (d), take care not to break the parallel wire.

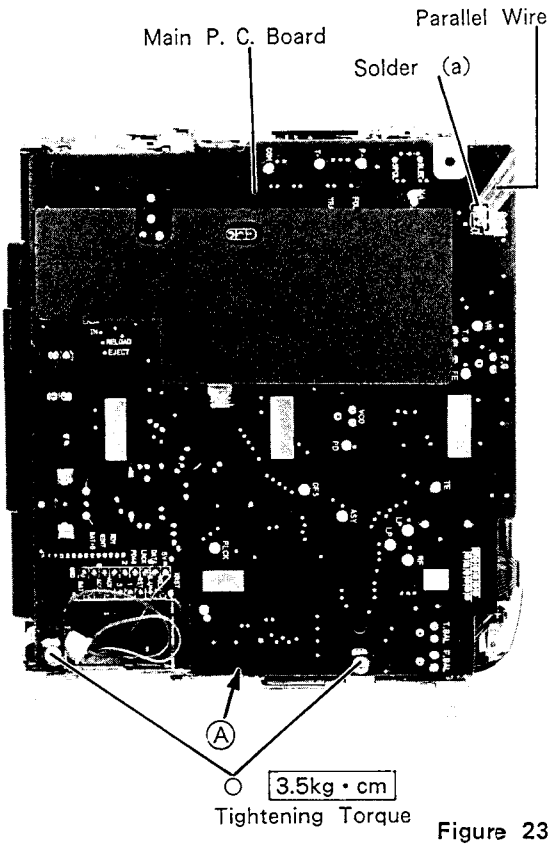


Figure 23

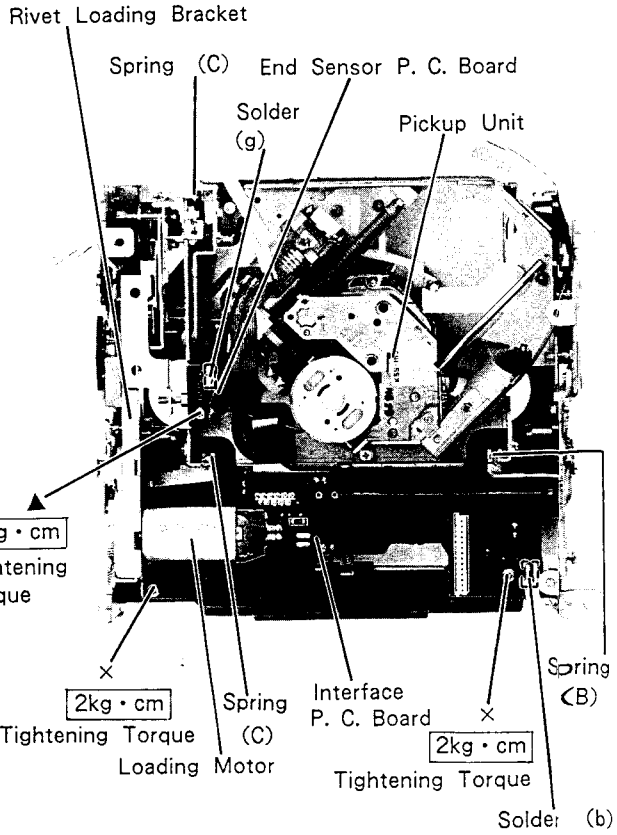


Figure 24

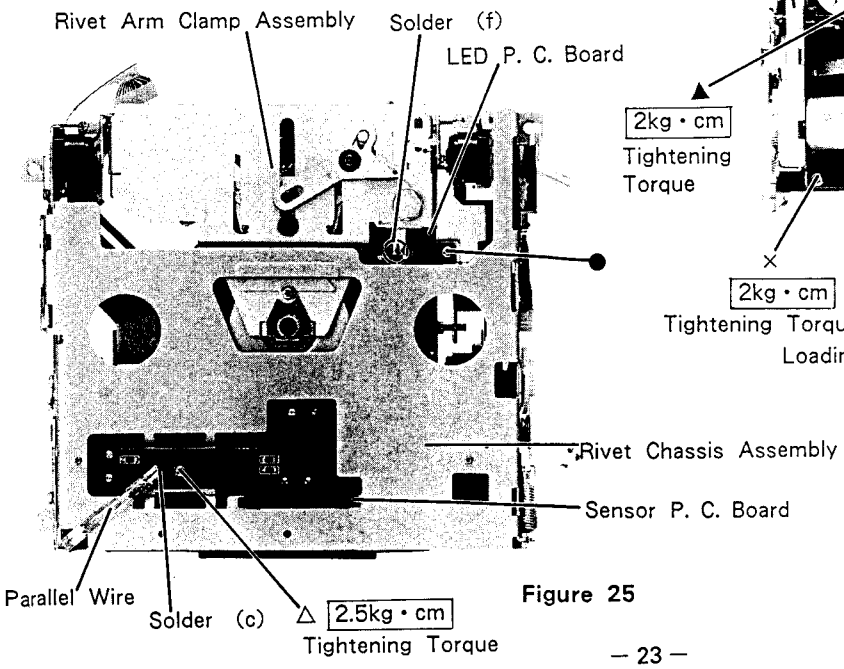


Figure 25

5. Removal of LED P. C. Board

(1) Unsolder the solder (f) as shown in Figure 25.

(2) Remove one screw marked "●" as shown in Figure 25.

Note : When unsoldering the solders (f), take care not to break the parallel wire.

6. Removal of End Sensor P. C. Board

(1) After removing the Main P. C. Board, unsolder the solder (g) as shown in Figure 24.

(2) Remove one screw marked "▲" as shown in Figure 24.

Note : When unsoldering the solders (g), take care not to break the parallel wire.

7. Removal of Damper (L) Bracket

(1) After removing the Main and Interface P. C.Boards, remove one screw (A) as shown in Figure 27.

(2) Remove one screw marked "■" as shown in Figure 27.

(3) Remove the damper from the Pickup Unit shaft, and the bracket can be removed.

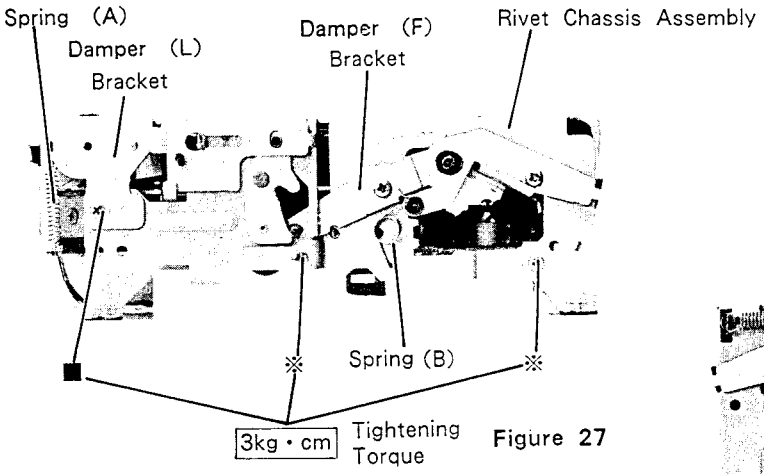


Figure 27

8. Removal of Damper (F) Bracket

(1) After removing the Main and Interface P. C. Boards, remove two springs (B) as shown in Figures 24 and 27.

(2) Remove two screws marked "※" as shown in Figure 27.

(3) Remove the damper from the Pickup Unit shaft, and the bracket can be removed.

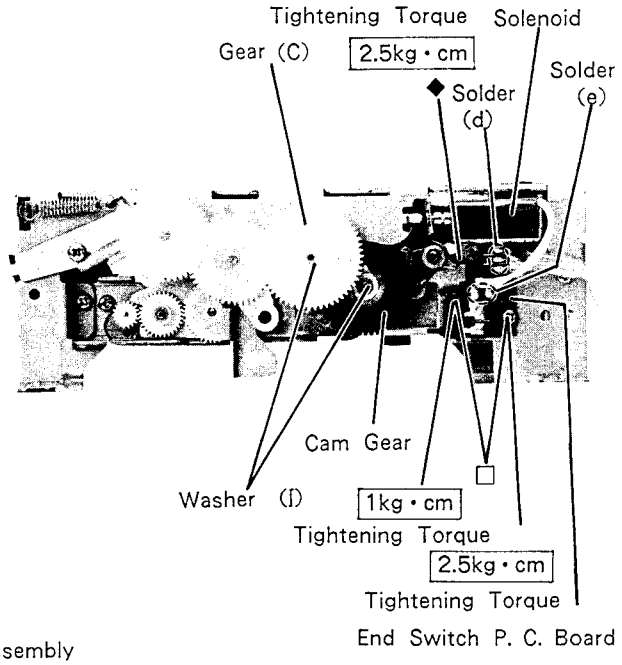


Figure 26

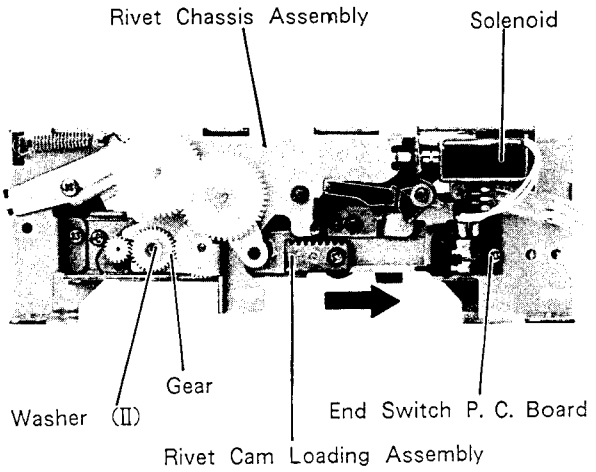


Figure 28

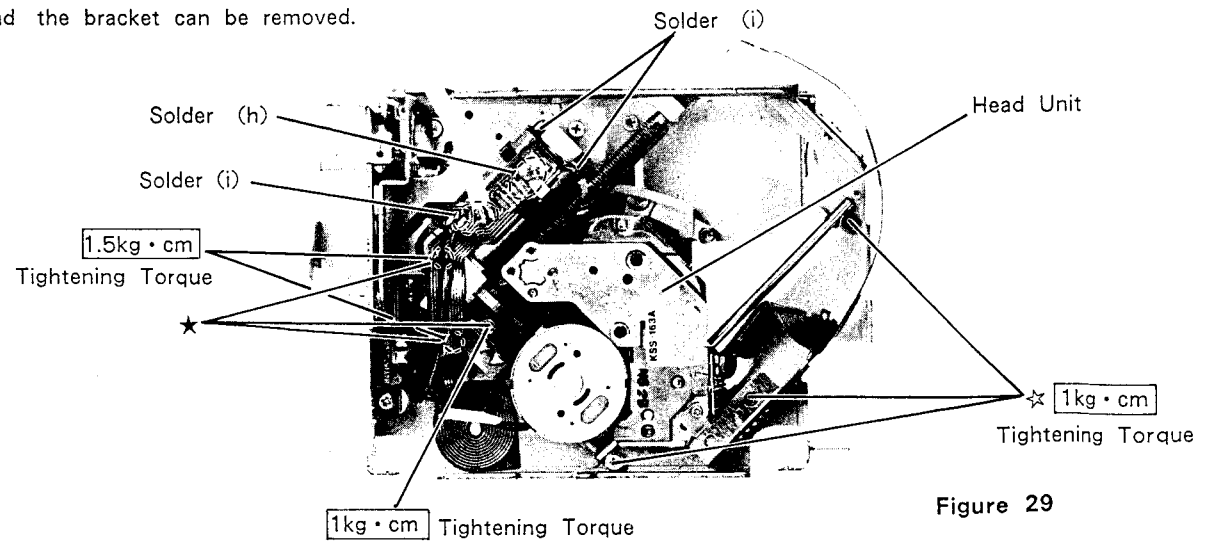


Figure 29

9. Removal of Pickup Unit

(1) After removing the both bracket for the damper (L) and (F), remove the washer (I), cam gear and gear (C) as shown in Figure 26.
(2) Remove three screws marked "*", and the Pickup Unit with Rivet Loading bracket Assembly can be removed as shown in Figure 30.
(3) Remove two springs (C), remove the damper from the Pickup Unit shaft, and then the Rivet Loading Bracket Assembly can be removed as shown in Figure 24.

10. Removal of Head Unit

(1) Unsolder solder (h) as shown in Figure 29.
(2) Remove three screws marked "☆" as shown in Figure 29.

11. Removal of Servo Motor P. C. Board

(1) After removing the Head Unit, unsolder three solders (i) as shown in Figure 29.
(2) Remove three screws marked "★" as shown in Figure 29.

12. Removal of Loading Motor

(1) After removing the rivet loading bracket, remove one washer (II) and gear as shown in Figure 28.
(2) After moving the Rivet Cam Loading Assembly in the arrow direction, remove two screws marked "◇" as shown in Figures 28 and 30.

13. Removal of Solenoid

(1) Unsolder the solder (e) as shown in Figure 26.
(2) Remove one screw marked "◆" as shown in Figure 26.

Precautions during Disassembling and Assembling

1) Be sure to use brand-new washer and do not use any washer which was previously used. The new washer should not have peeling on cleavage.
2) When performing soldering, take care that temperature of the iron tip will not exceed 320℃ and soldering time should be less than 3 seconds. Also make sure there is no defect soldering such as loose solder, solder short and foil breakage.
3) Notes when mounting the cam gear and the gear (C) onto the shaft (A) of Arm Load (R) Assembly by keeping the gears engaged as shown in Figure 32.

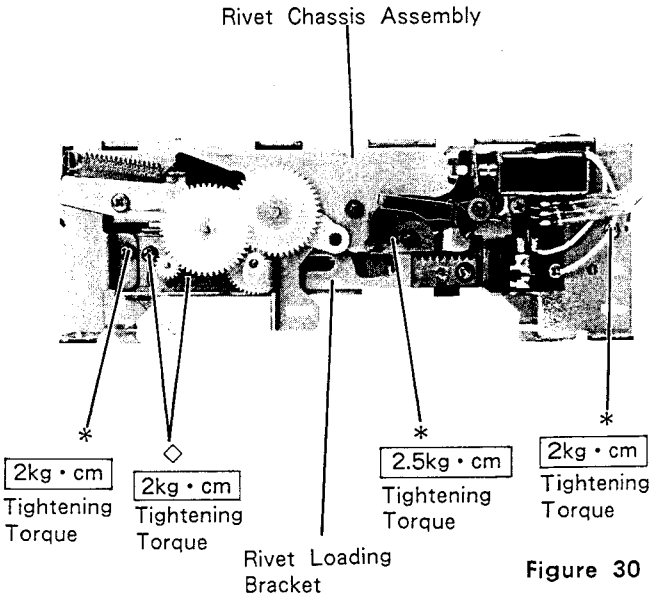


Figure 30

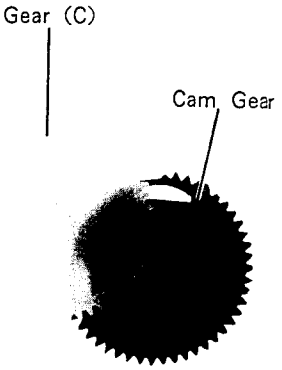


Figure 31

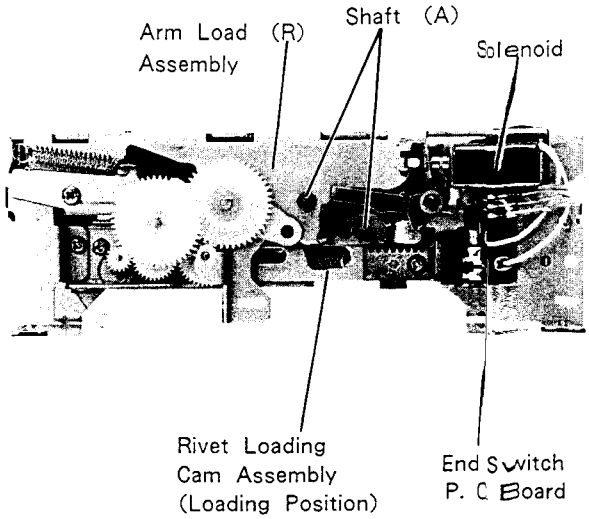


Figure 32